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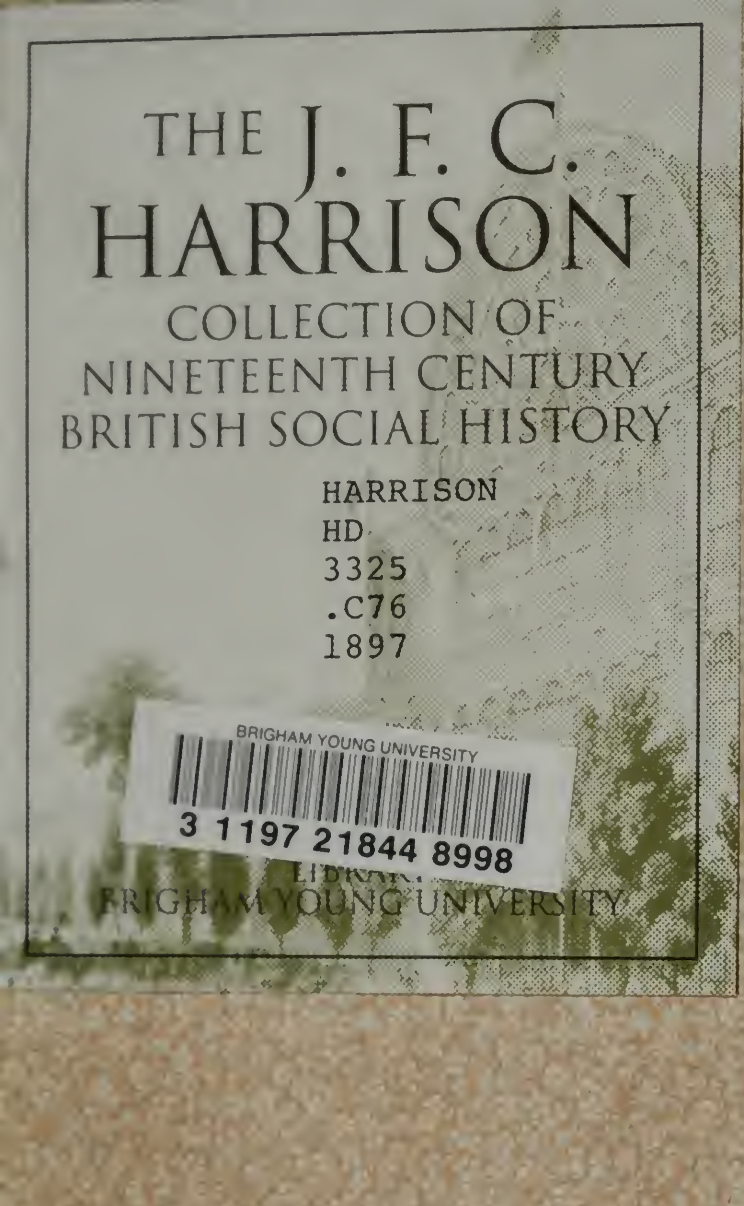

THE J. F. C.
HARRISON
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NINETEENTH CENTURY
BRITISH SOCIAL HISTORY

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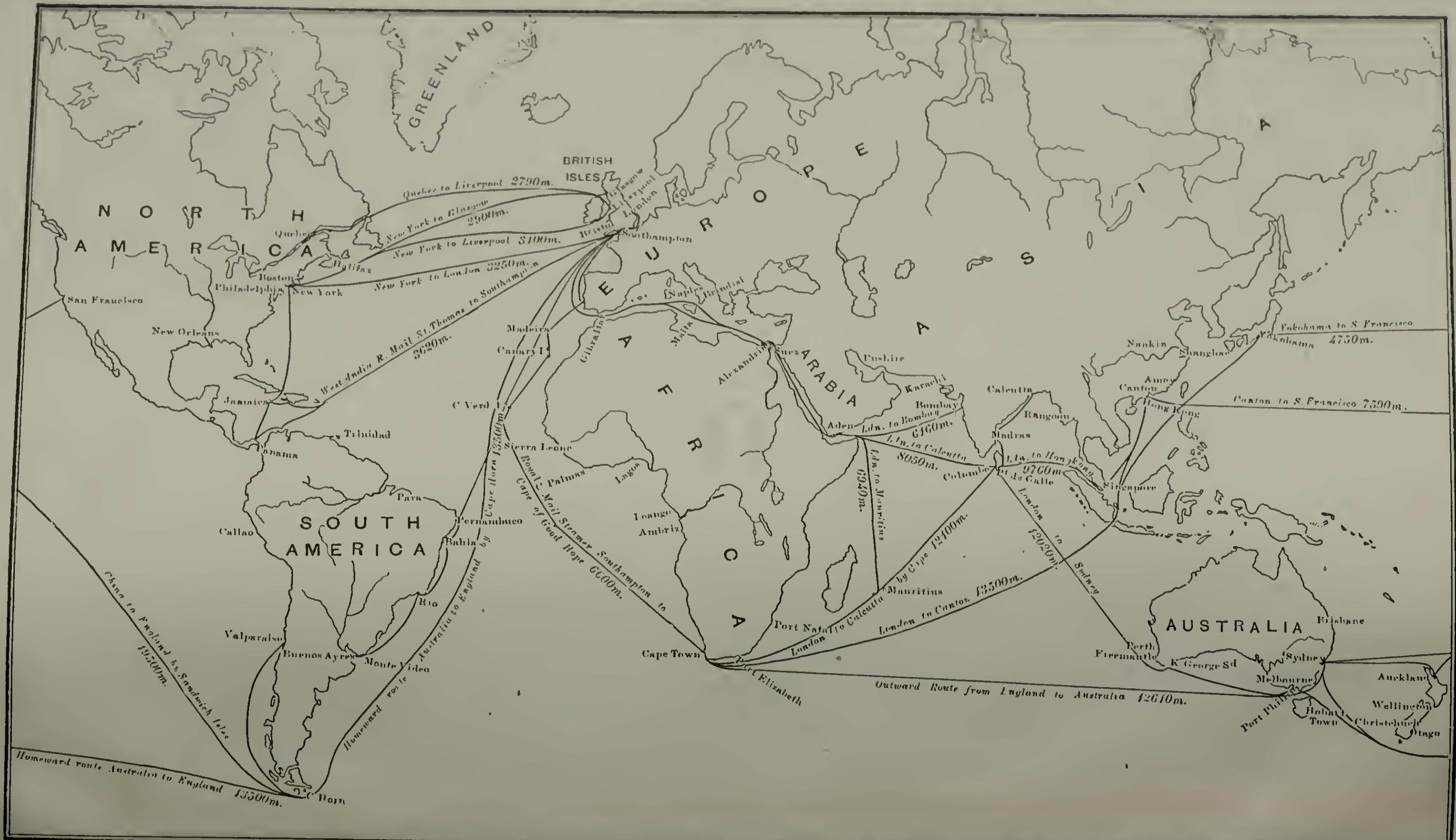
Map of the World.

SHOWING ROUTES TO BRITISH POSSESSIONS FROM GREAT BRITAIN.



THE

CO-OPERATIVE WHOLESALE SOCIETIES

LIMITED,

ENGLAND AND SCOTLAND.

ANNUAL

FOR 1897.

PUBLISHED BY
THE CO-OPERATIVE WHOLESALE SOCIETY LIMITED,
1, BALLOON STREET, MANCHESTER;
AND
THE SCOTTISH CO-OPERATIVE WHOLESALE SOCIETY LIMITED,
119, PAISLEY ROAD, GLASGOW.

MANCHESTER:
PRINTED AND BOUND BY THE
LTD.
AT THEIR WORKS,
HOLGATE STREET, CORPORATION STREET.

PREFACE.

AN interesting feature of the present issue of the Annual is that, in addition to its compilation by the Co-operative Wholesale Society, the printing of the volume has been performed by the Society's own Printing Department.

The contributed articles deal with subjects of present importance, several having special reference to recent developments of social questions.

Fiscal legislation—local, Indian, and American—finds able exponents in G. Howell, F.S.S., Holt S. Hallett, and E. Porritt.

The Wholesale Society has, during the past year, erected several creameries in Ireland for the production of butter on co-operative lines similar to those adopted with such marked success on the Continent. The advantages of the system are fully explained in a special article.

The entire selection of articles has been made with a view to furnish students and Co-operators with reliable information on current topics, and it is hoped that the perusal of the volume will be accompanied by pleasure and profit.

The Wholesale Society has become a landed proprietor by its acquirement of an estate comprising 741 acres of agricultural land in Shropshire.

This is considered by the majority of Co-operators to indicate a distinct advance in the policy of the Society, and they await the issue of this enterprise with intense interest, anticipating by this experiment a partial solution, at any rate, of some of the problems connected with the land.

A portion of the volume is devoted to statistical and general information of an extensive and varied character, which includes the text of the Agricultural Rating Bill.

It is with much regret we record the death, on December 2nd, 1896, of Mr. T. E. Webb, member of the London Branch Committee. Mr. Webb served in the capacity of Director for twenty-two years, and was untiring in his efforts to promote the welfare of Co-operation and the Wholesale Society.

THE COMMITTEE.

December 11th, 1896.

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THIRTY-THREE YEARS' PROGRESS OF Co-operative Societies in the United Kingdom.

Years.	Sales. £
1862	2,333,523
1863	2,673,778
1864	2,836,606
1865	3,373,847
1866	4,462,676
1867	6,001,153
1868	7,122,360
1869	7,353,363
1870	8,201,685
1871	9,463,771
1872	13,012,120
1873	15,639,714
1874	16,374,053
1875	18,499,901
1876	19,921,054
1877	21,390,447
1878	21,402,219
1879	20,382,772
1880	23,248,314
1881	24,945,063
1882	27,541,212
1883	29,336,028
1884	30,424,101
1885	31,305,910
1886	32,730,745
1887	34,483,771
1888	37,793,903
1889	40,674,673
1890	43,731,669
1891	49,024,171
1892	51,060,854
1893	51,803,836
1894	52,110,800

Total Sales in the Thirty-three Years, 1862 to 1894.	£760,660,092.
Total Profits in the Thirty-three Years, 1862 to 1894.	66,686,497.

STATISTICAL POSITION OF CO-OPERATIVE SOCIETIES IN THE UNITED KINGDOM,

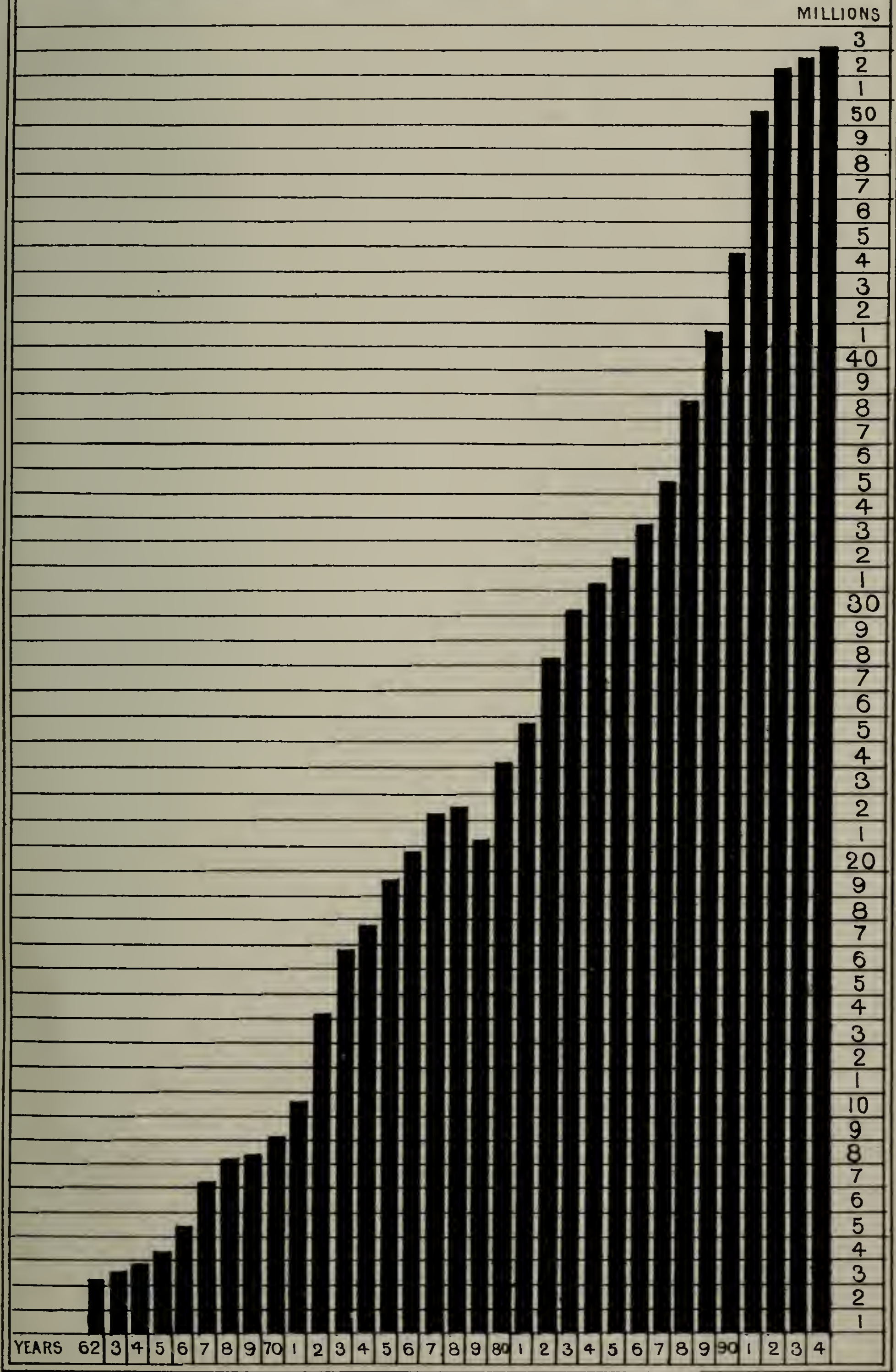
December 31st, 1894,

Compiled from the Returns made by Societies to the Registrar and Co-operative Union.

		£
Number of Members	1,373,004	
Share Capital		15,756,064
Loan Capital		4,064,681
Sales for 1894		52,110,800
Net Profits for 1894		4,928,838
Devoted to Education, 1894		36,553

THIRTY-THREE YEARS' PROGRESS

OF CO-OPERATIVE SOCIETIES IN THE UNITED KINGDOM.



THIRTY-TWO YEARS' PROGRESS

OF THE

Co-operative Wholesale Society Limited.

Years.		Sales. £	Years.		Sales. £
1864	(30 Weeks)	51,857	1880	......	3,339,681
1865	......	120,754	1881	......	3,574,095
1866	......	175,489	1882	......	4,038,238
1867	(65 Weeks)	331,744	1883	......	4,546,889
1868	......	412,240	1884	(53 Weeks)	4,675,371
1869	......	507,217	1885	......	4,793,151
1870	(53 Weeks)	677,734	1886	......	5,223,179
1871	......	758,764	1887	......	5,713,235
1872	......	1,153,132	1888	......	6,200,074
1873	......	1,636,950	1889	(53 Weeks)	7,028,944
1874	......	1,964,829	1890	......	7,429,073
1875	......	2,247,395	1891	......	8,766,430
1876	(53 Weeks)	2,697,366	1892	......	9,300,904
1877	......	2,827,052	1893	......	9,526,167
1878	......	2,705,625	1894	......	9,443,938
1879	(50 Weeks)	2,645,331	1895	(53 Weeks)	10,141,917

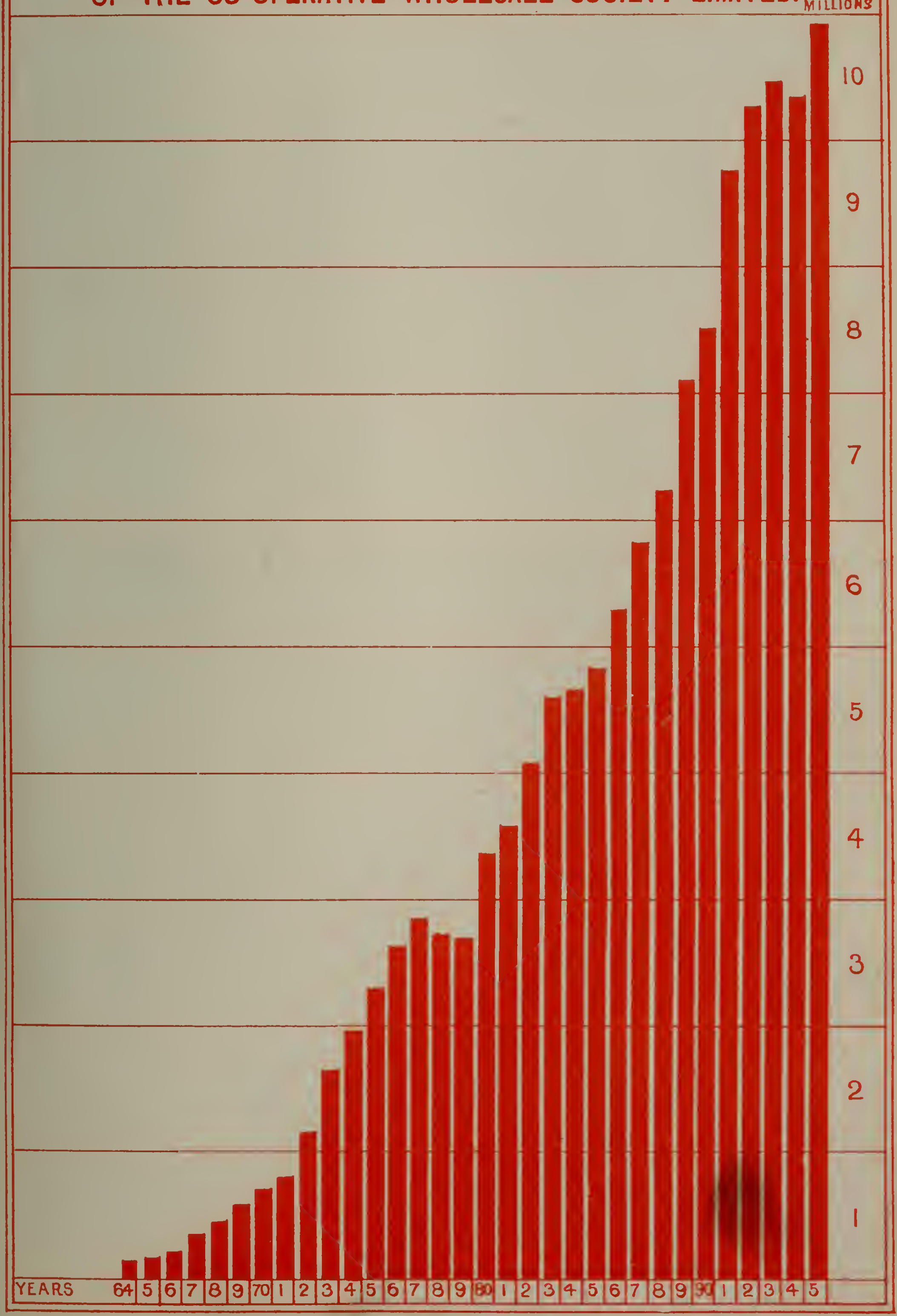
Total Sales in the Thirty-two Years, 1864 to 1895.	...	£124,654,765.
Total Profits in the Thirty-two Years, 1864 to 1895.	...	1,665,303.

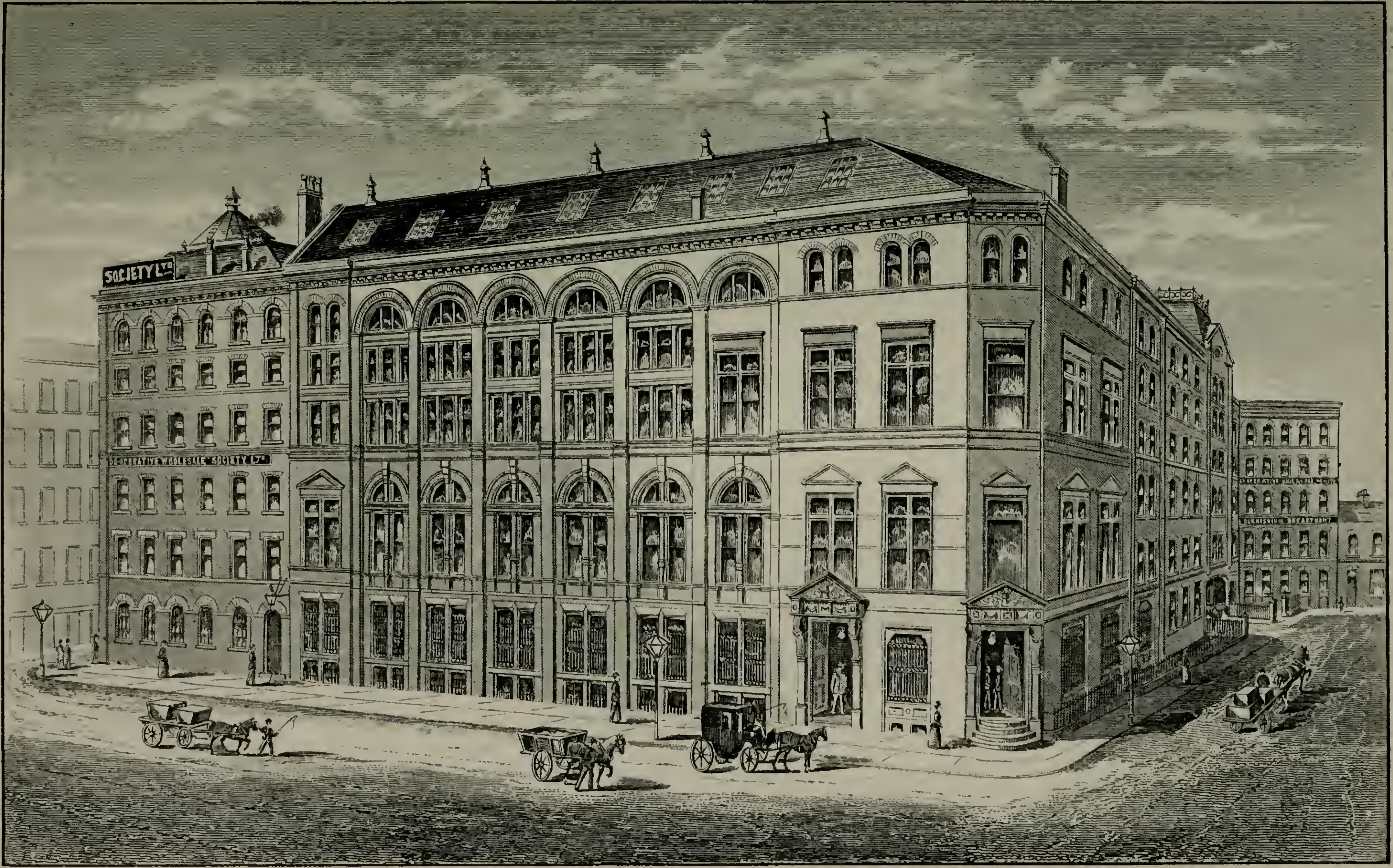
STATISTICAL POSITION OF THE CO-OPERATIVE WHOLESALE SOCIETY LIMITED,

December 22nd, 1895.

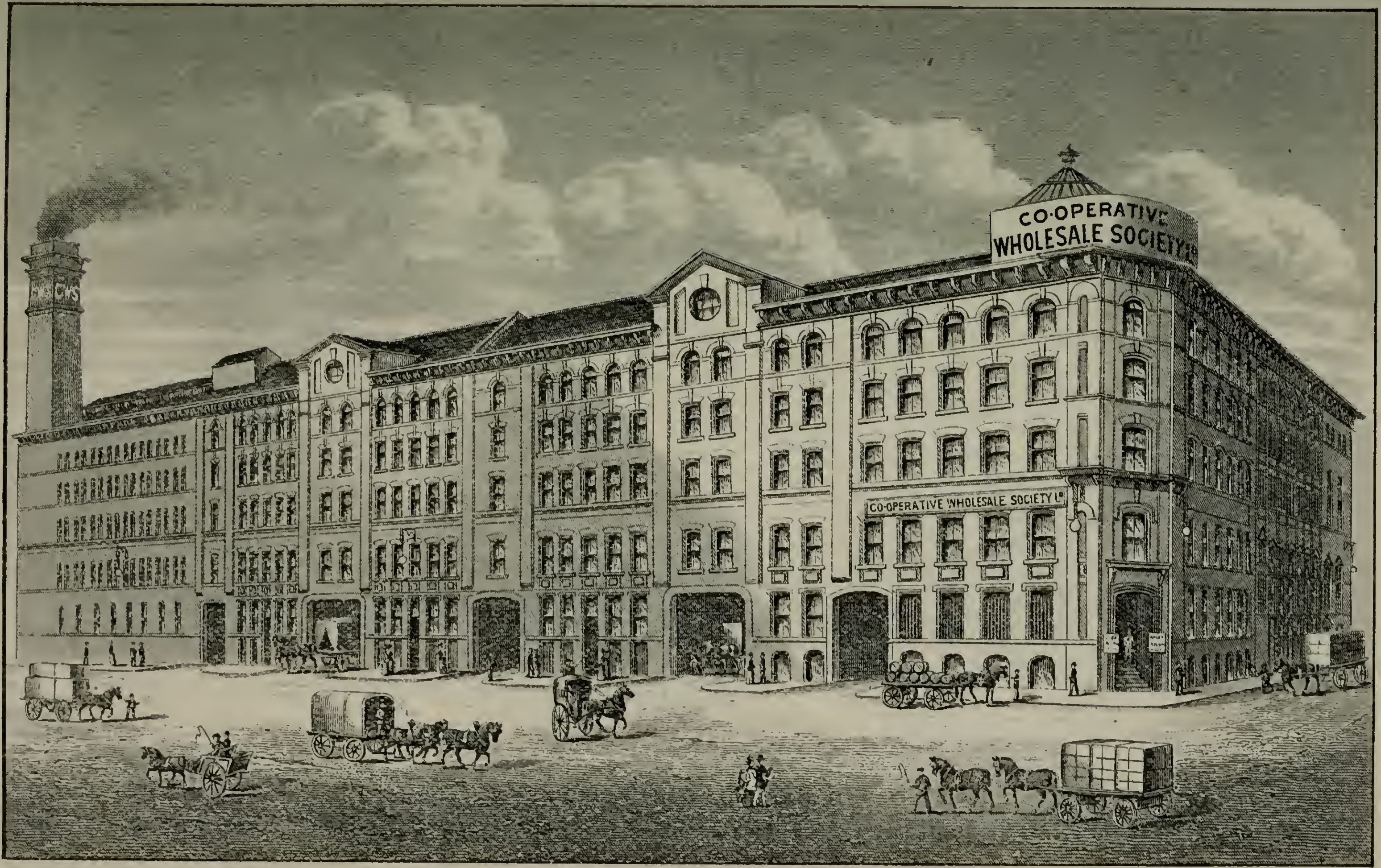
		£
Number of Societies holding Shares...	1,035	
Number of Members belonging to Shareholders	930,985	
Share Capital		635,541
Loans and Deposits		1,092,070
Reserve Fund—Trade and Bank		64,354
Insurance Fund		282,563
Sales for Year 1895		10,141,917
Net Profits for Year 1895		192,766

THIRTY-TWO YEARS' PROGRESS
OF THE CO-OPERATIVE WHOLESALE SOCIETY LIMITED.

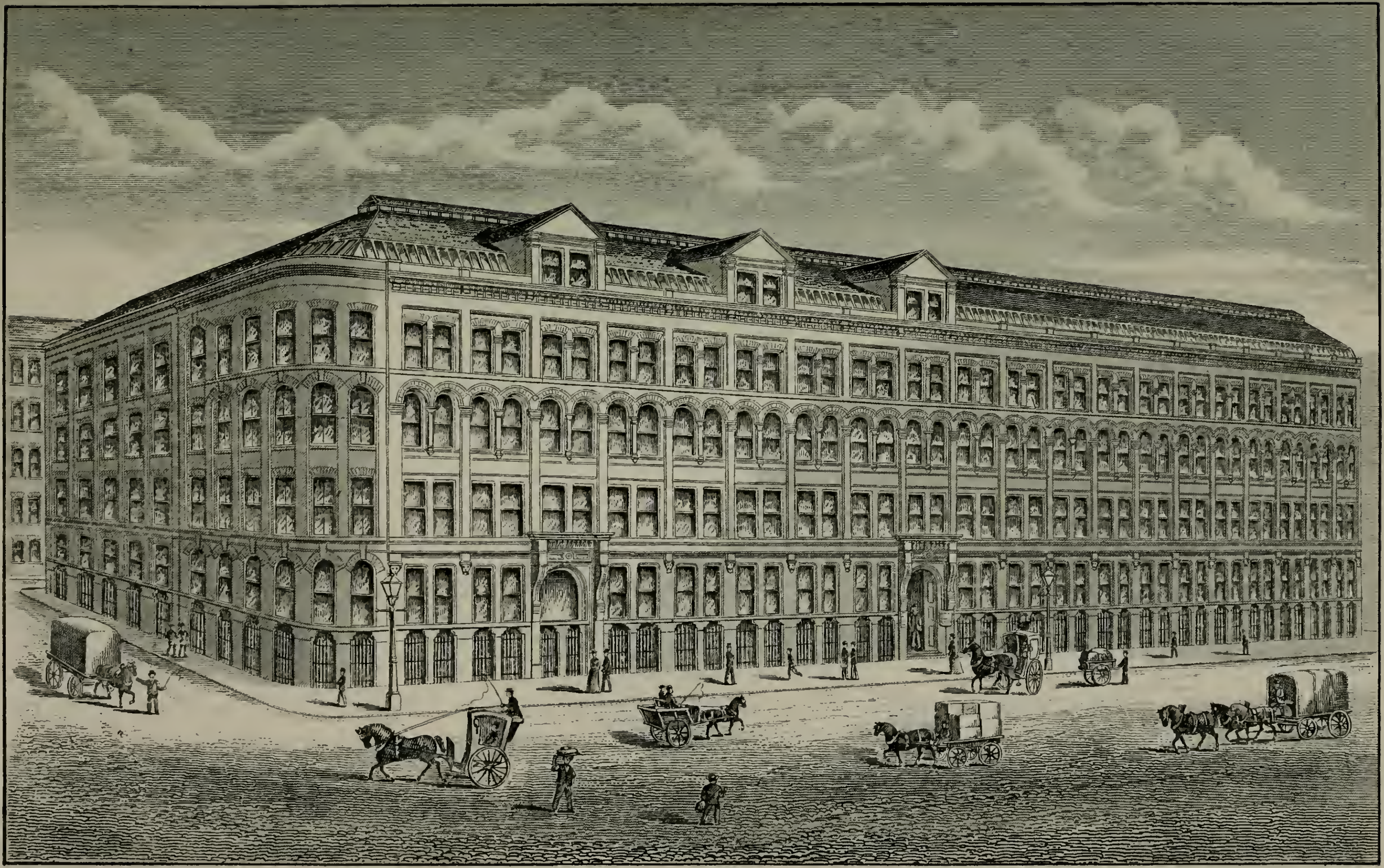



SOCIETY LTD.
CO-OPERATIVE WHOLESALE SOCIETY LTD.

MANCHESTER.
REGISTERED OFFICES, BANK, CENTRAL GROCERY AND PROVISION, BOOT AND SHOE, AND FURNISHING WAREHOUSES,
BALLOON STREET AND HOLGATE STREET. *(See pages 14, 30, 69, 70, and 96.)*


CO-OPERATIVE WHOLESALE SOCIETY L^D
CO-OPERATIVE WHOLESALE SOCIETY L^D
CWS CWS

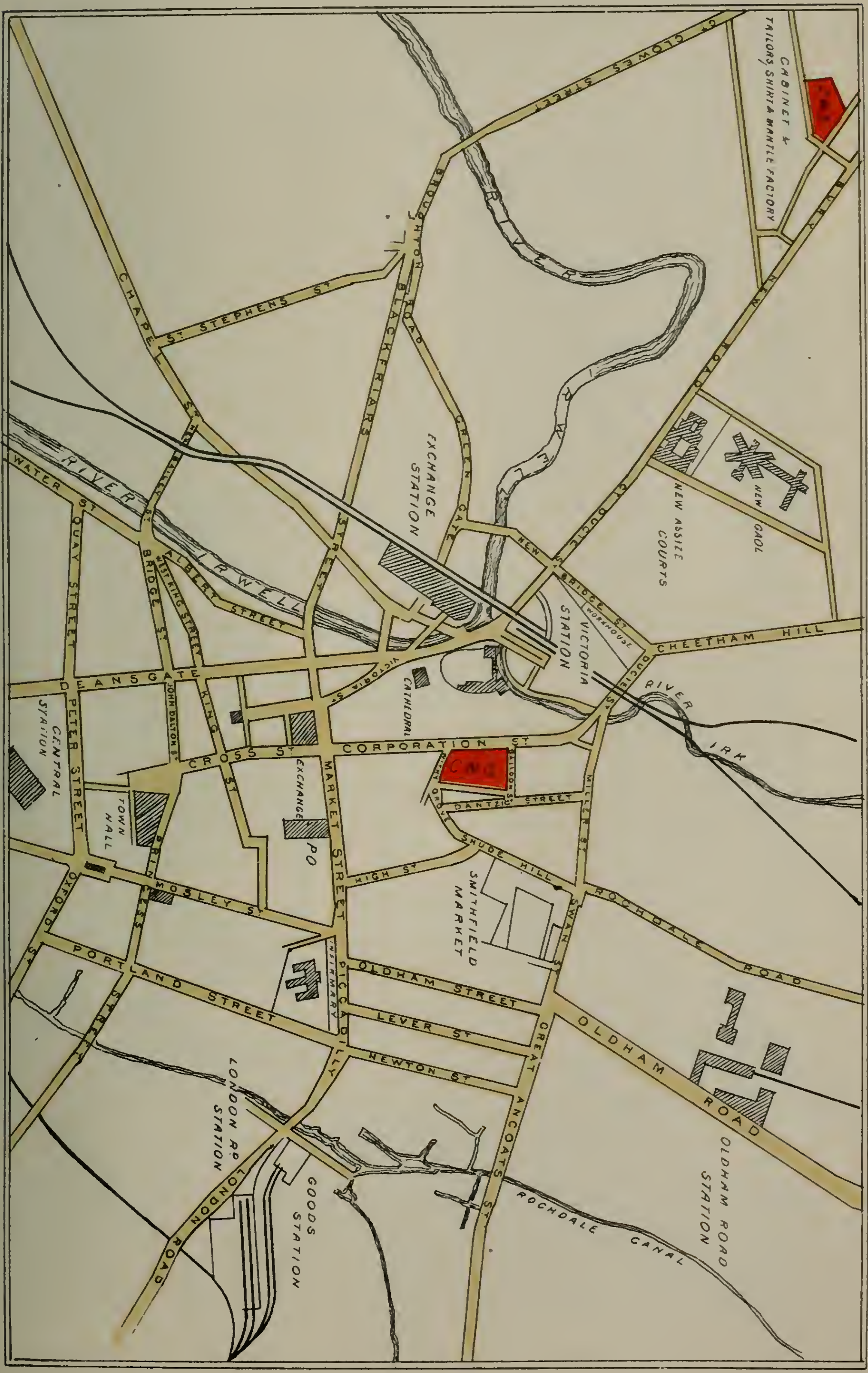
MANCHESTER.
CENTRAL GROCERY AND PROVISION AND BOOT AND SHOE WAREHOUSES, Balloon Street and Garden Street.
(See pages 16, 66, and 96.)

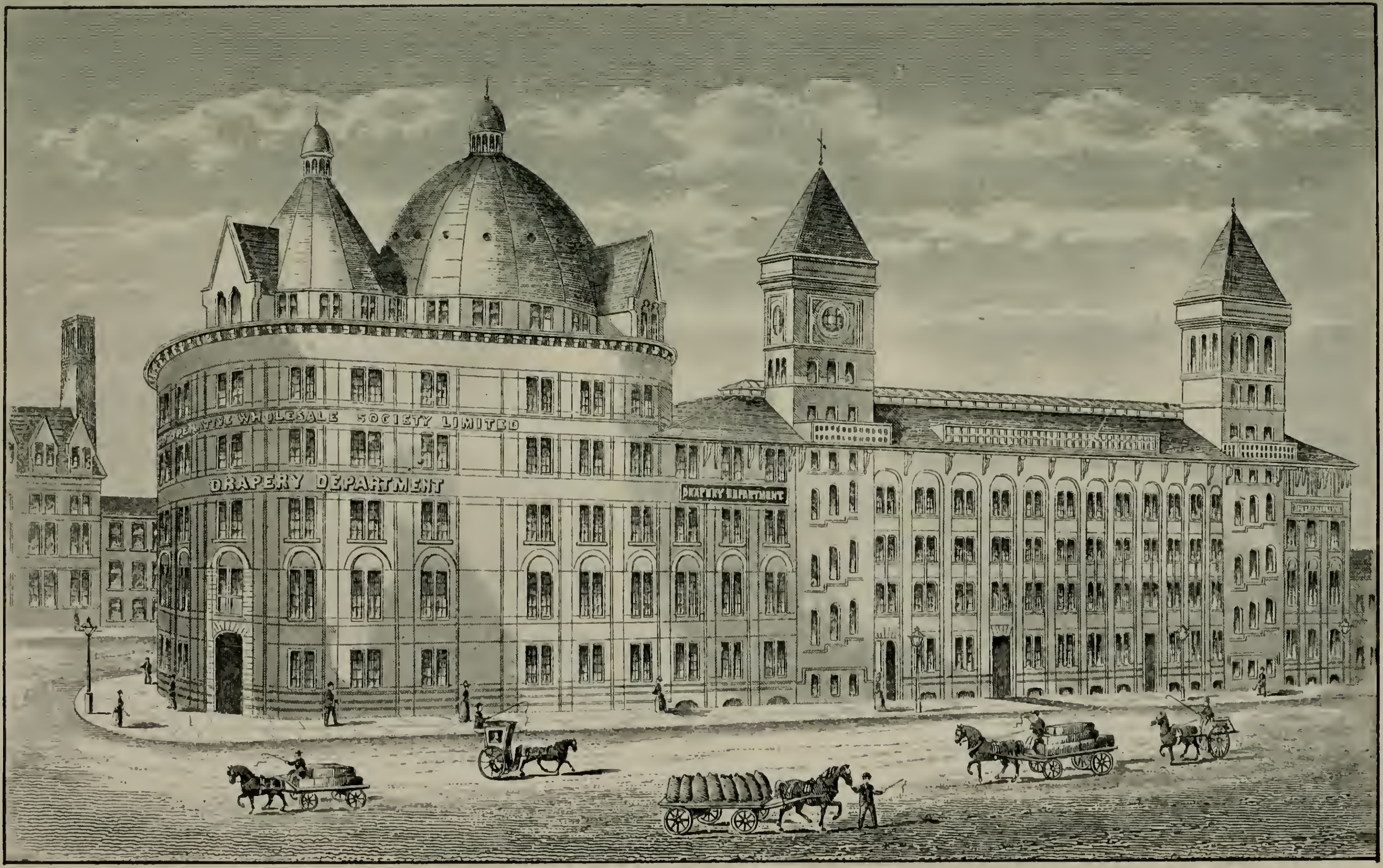


MANCHESTER DRAPERY, WOOLLEN CLOTH, AND READY-MADES WAREHOUSES, DANTZIC STREET.
(See pages 24 to 29, 67, 68, and 96.)

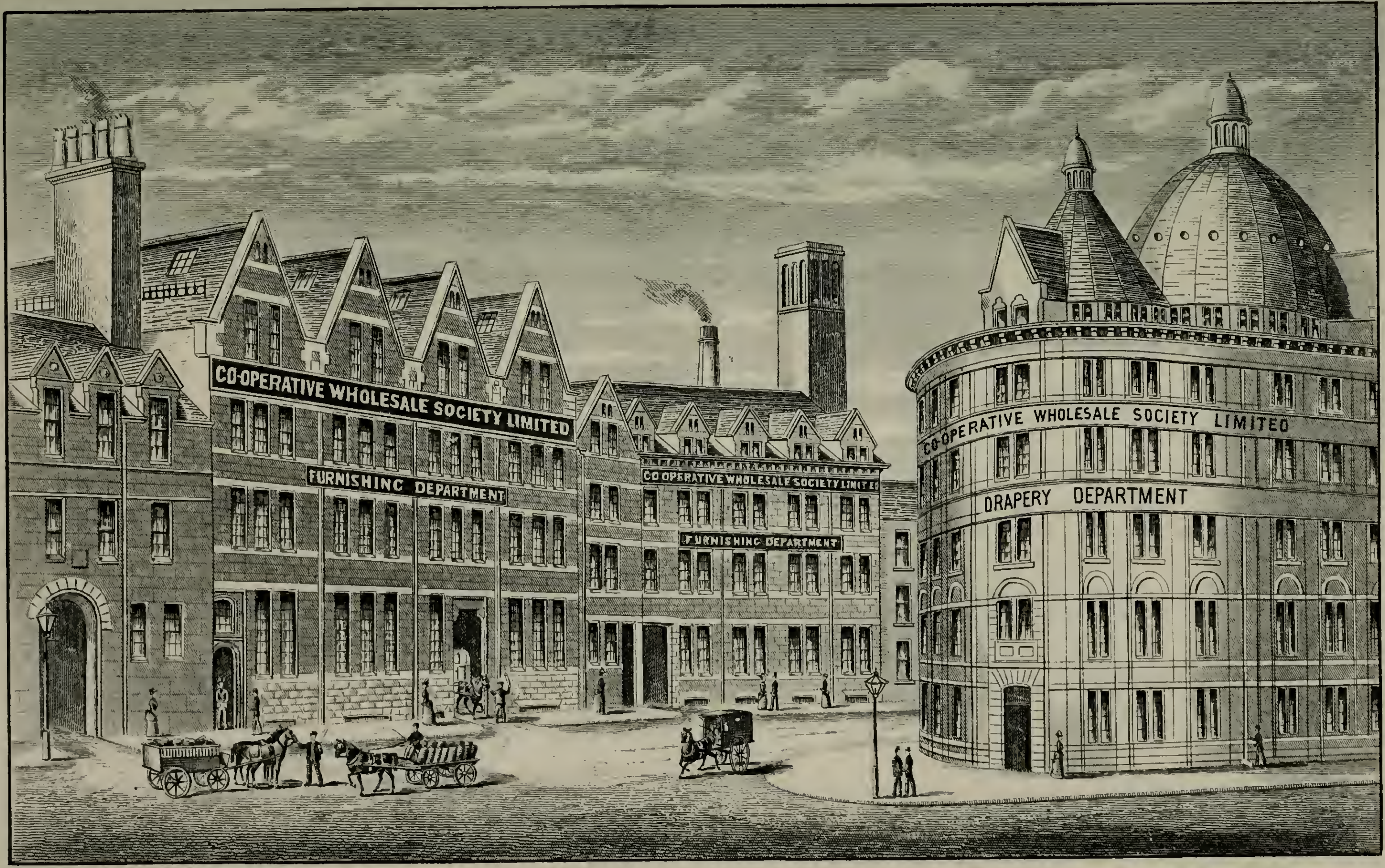
PLAN OF MANCHESTER,

Showing the most Direct Route to the Co-operative Wholesale Society's Central Offices and Broughton Works from the Railway Stations and Principal Places.





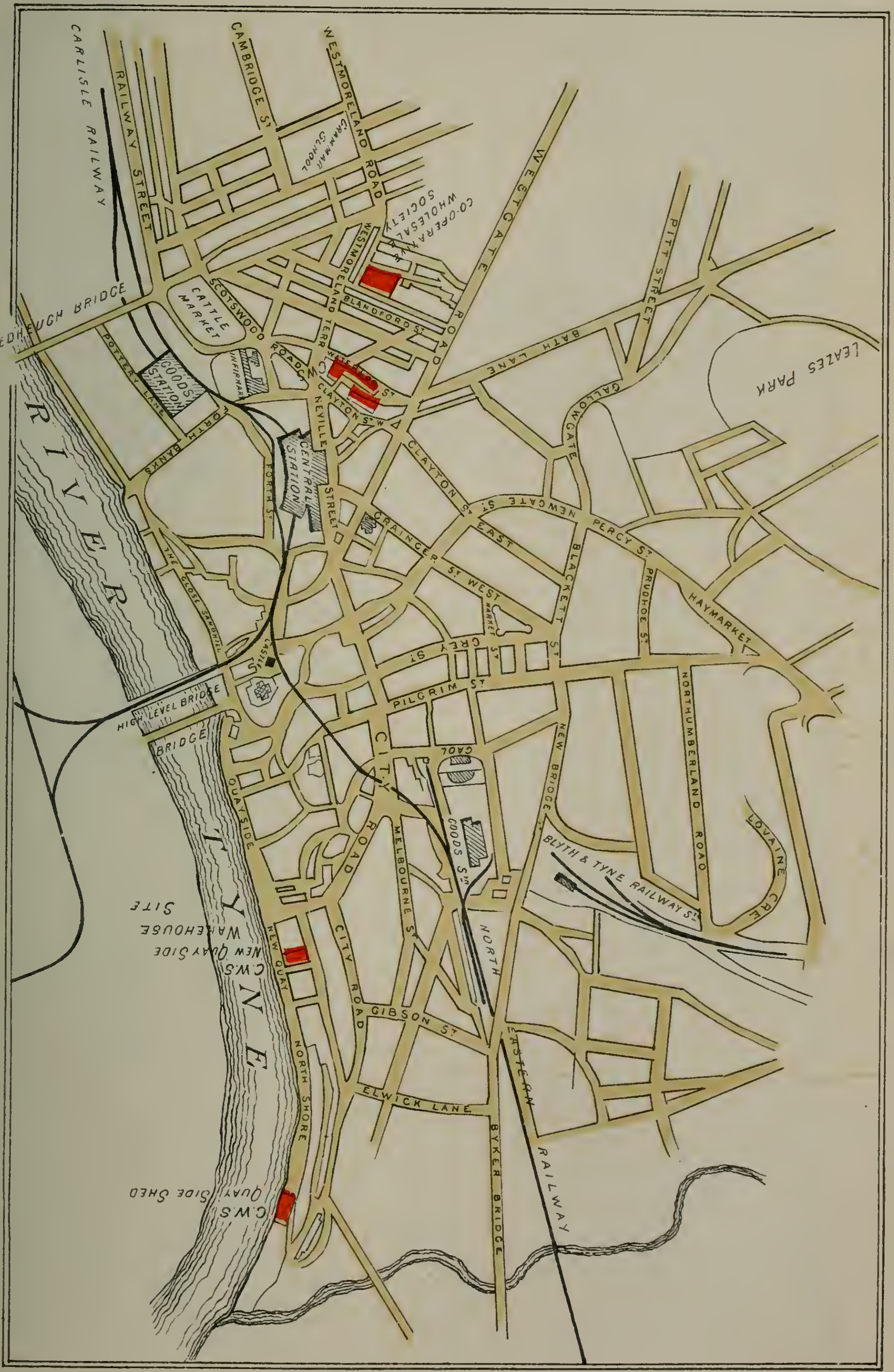
NEWCASTLE BRANCH.
GROCERY, DRAPERY, AND BOOT AND SHOE WAREHOUSES, WATERLOO STREET.
(See pages 71 and 98.)

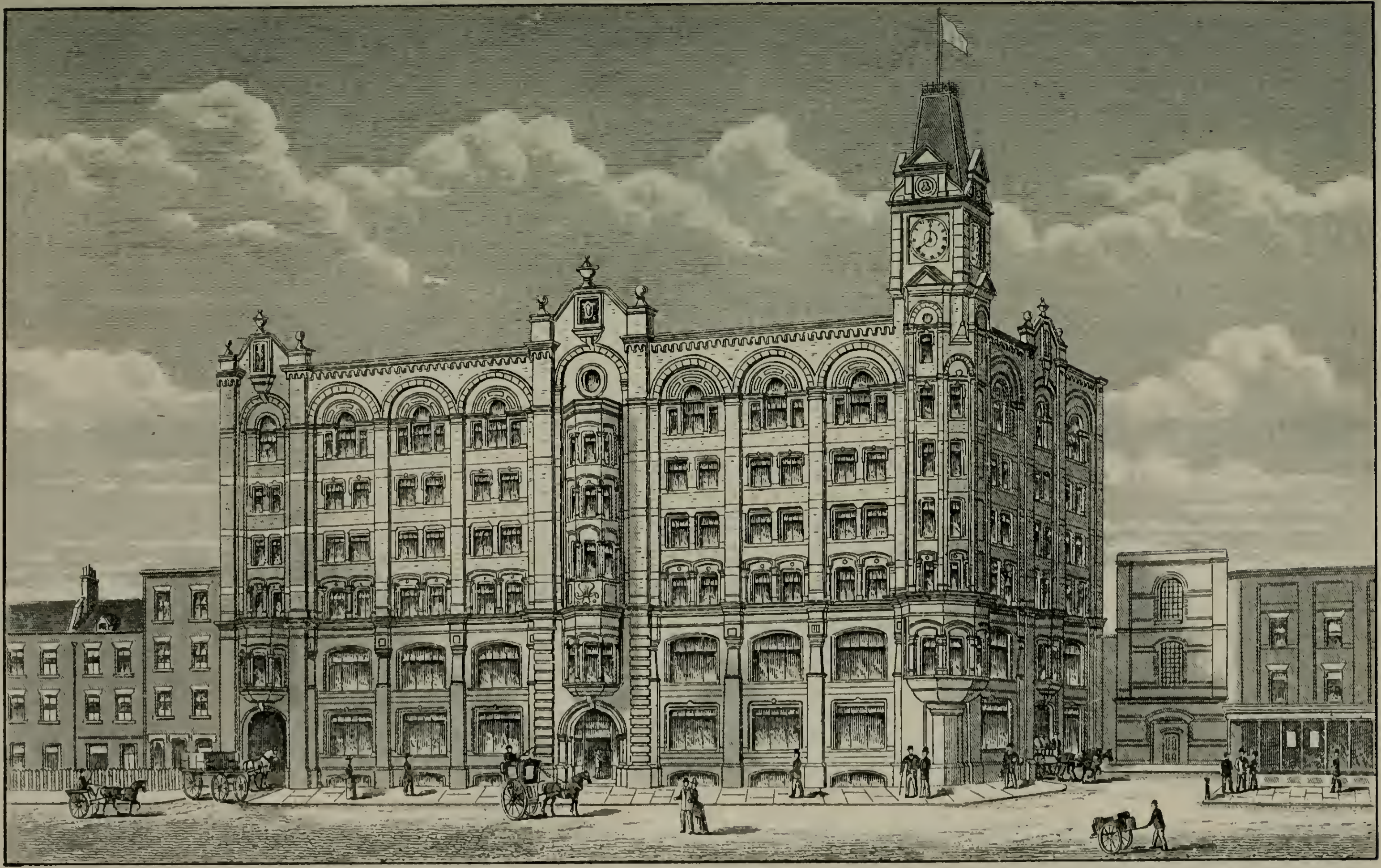

CO-OPERATIVE WHOLESALE SOCIETY LIMITED
FURNISHING DEPARTMENT
CO-OPERATIVE WHOLESALE SOCIETY LIMITED
FURNISHING DEPARTMENT
CO-OPERATIVE WHOLESALE SOCIETY LIMITED
DRAPERY DEPARTMENT

NEWCASTLE DRAPERY AND FURNISHING WAREHOUSES, THORNTON STREET.
(See pages 72, 74, and 98.)

PLAN OF NEWCASTLE,

Showing the most Direct Route to the Co-operative Wholesale Society's Premises from the Railway Stations and Principal Places.

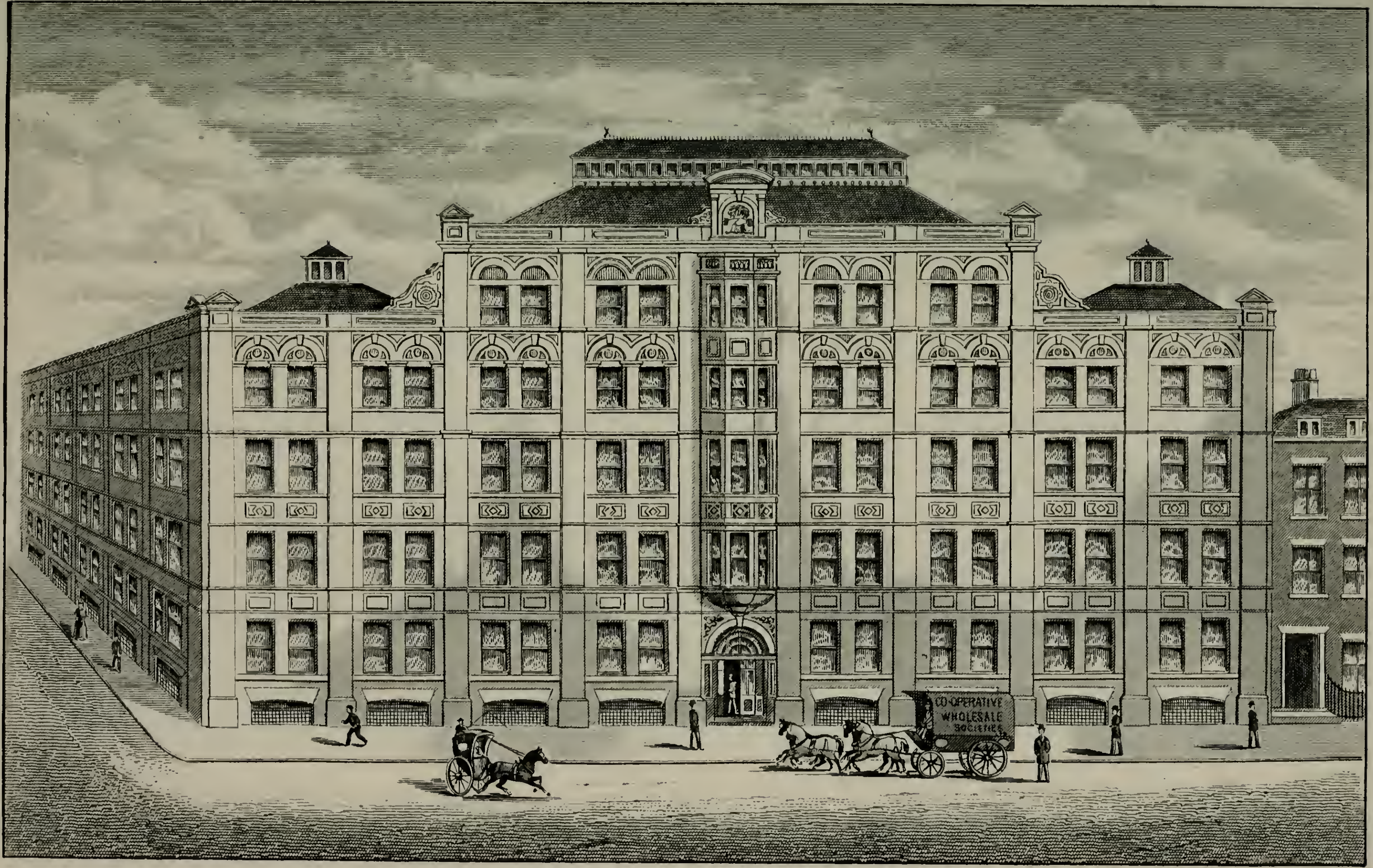




LONDON BRANCH.

GENERAL OFFICES, GROCERY, DRAPERY, BOOT AND SHOE AND FURNISHING DEPARTMENTS, AND CO-OPERATIVE HALL, LEMAN STREET.

(See pages 75 to 78, and 99.)



LONDON TEA WAREHOUSE, LEMAN STREET.

(See page 19.)

LONDON TEA DEPARTMENT.

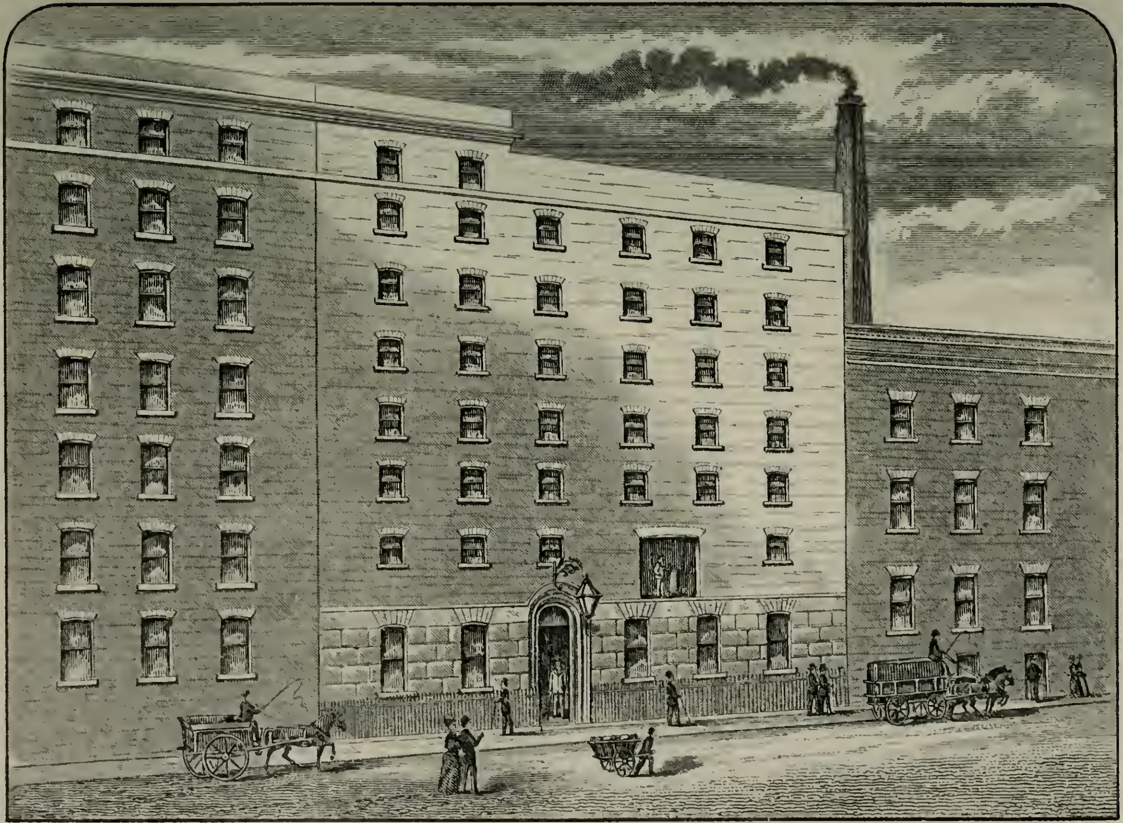
Nº1.
OFFICES.

Nº2.
TASTING ROOMS
& DELIVERY DEPARTMENT.

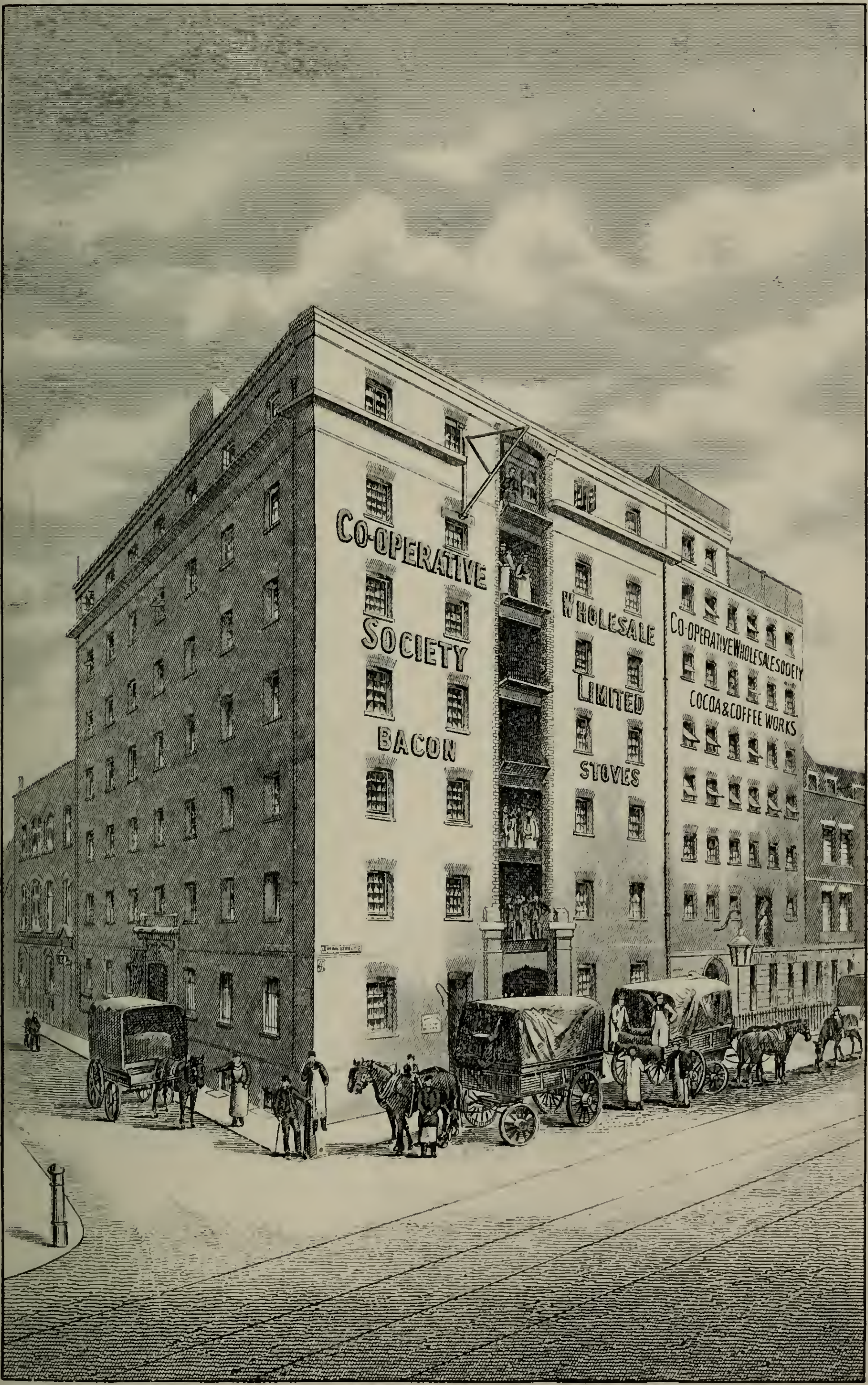
Nº3
TEA BLENDING
& PACKING
DEPARTMENT.

Nº4
ORIGINAL IMPORTED
TEA & RECEIVING
DEPARTMENT.

(See page 19.)

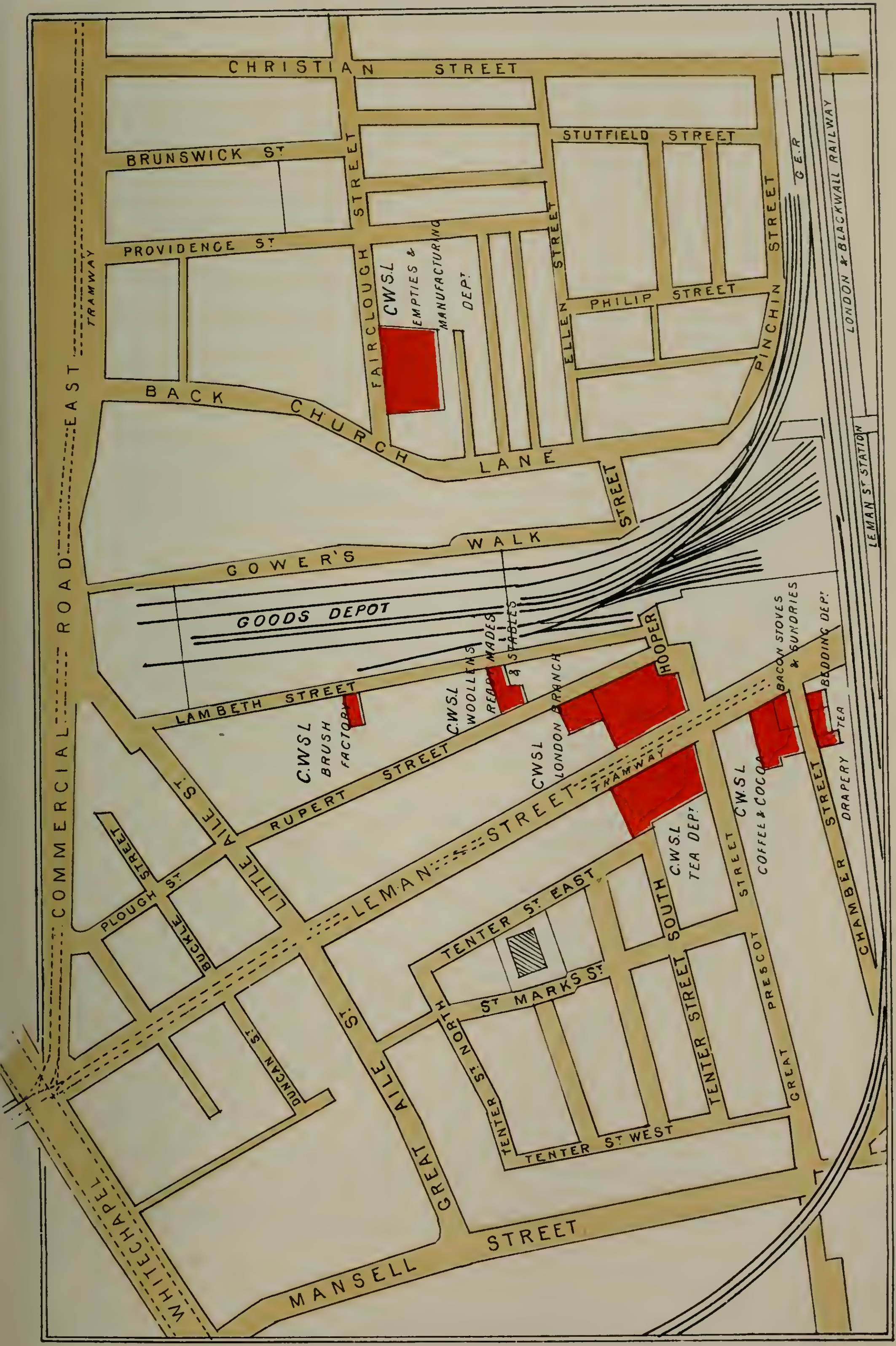


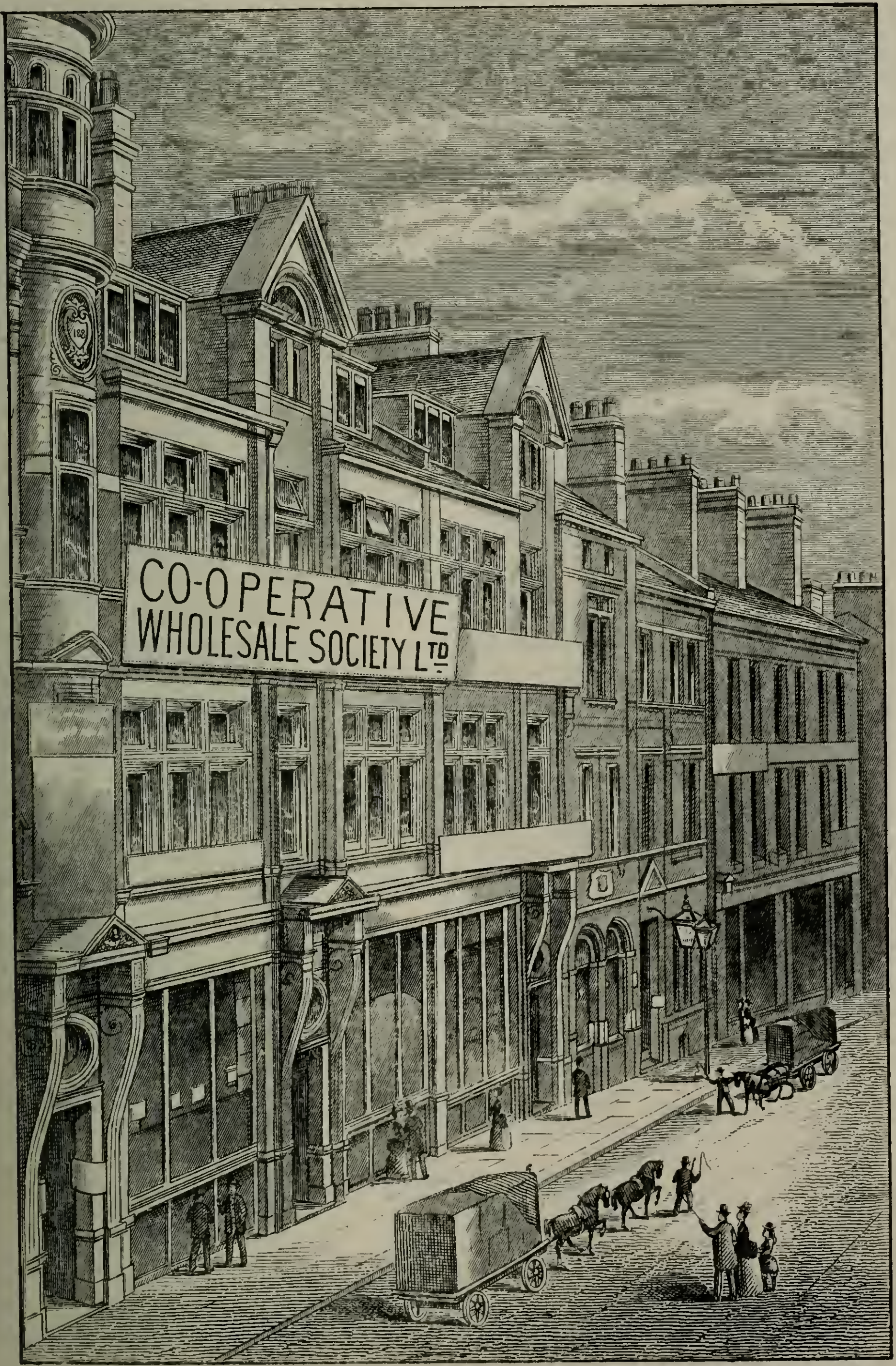
LONDON COCOA AND CHOCOLATE WORKS,
116, LEMAN STREET. *(See page 19.)*



LONDON BACON STOVES,
118, LEMAN STREET.

PLAN OF LONDON, SHOWING BRANCH PREMISES.

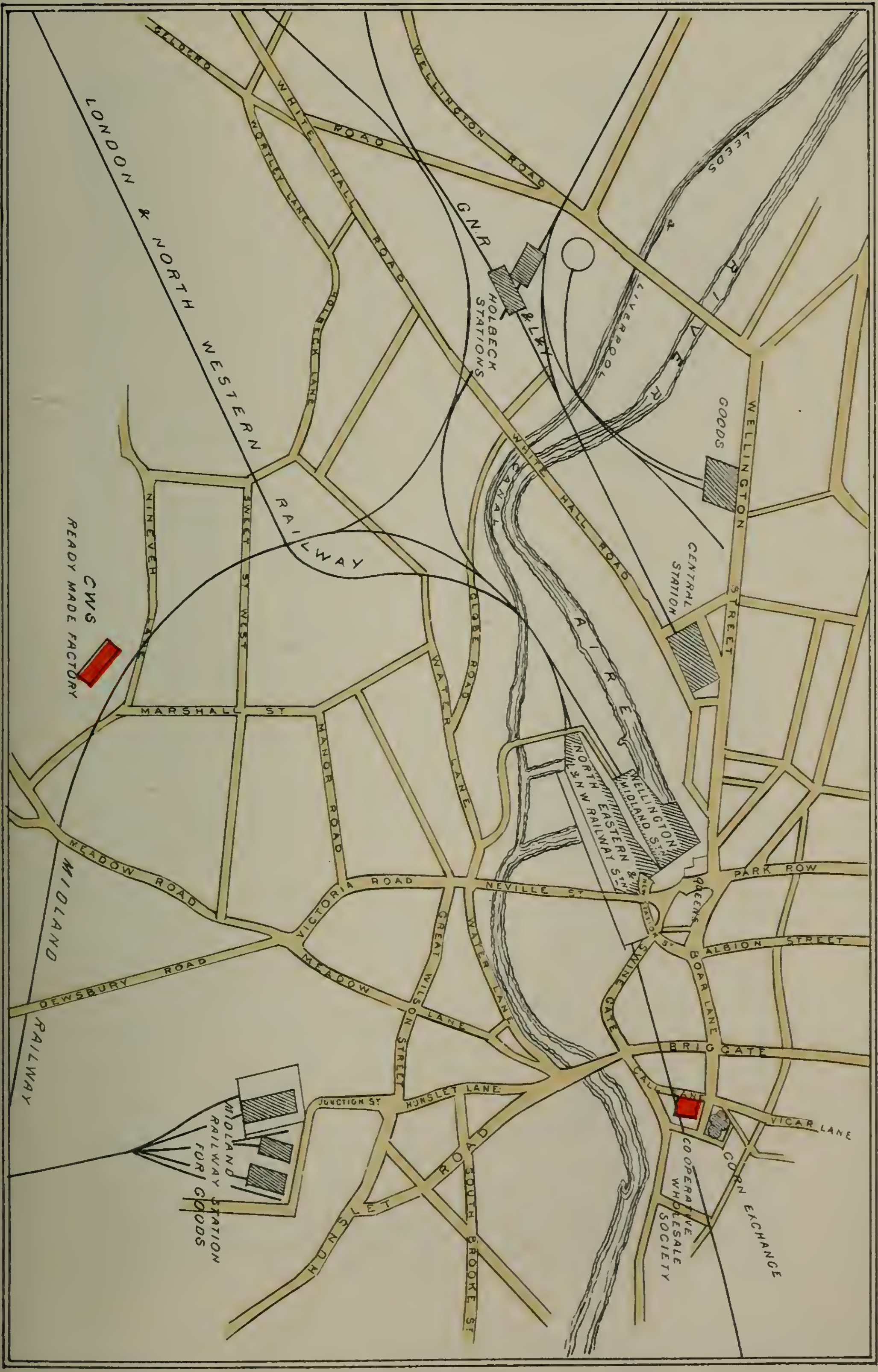


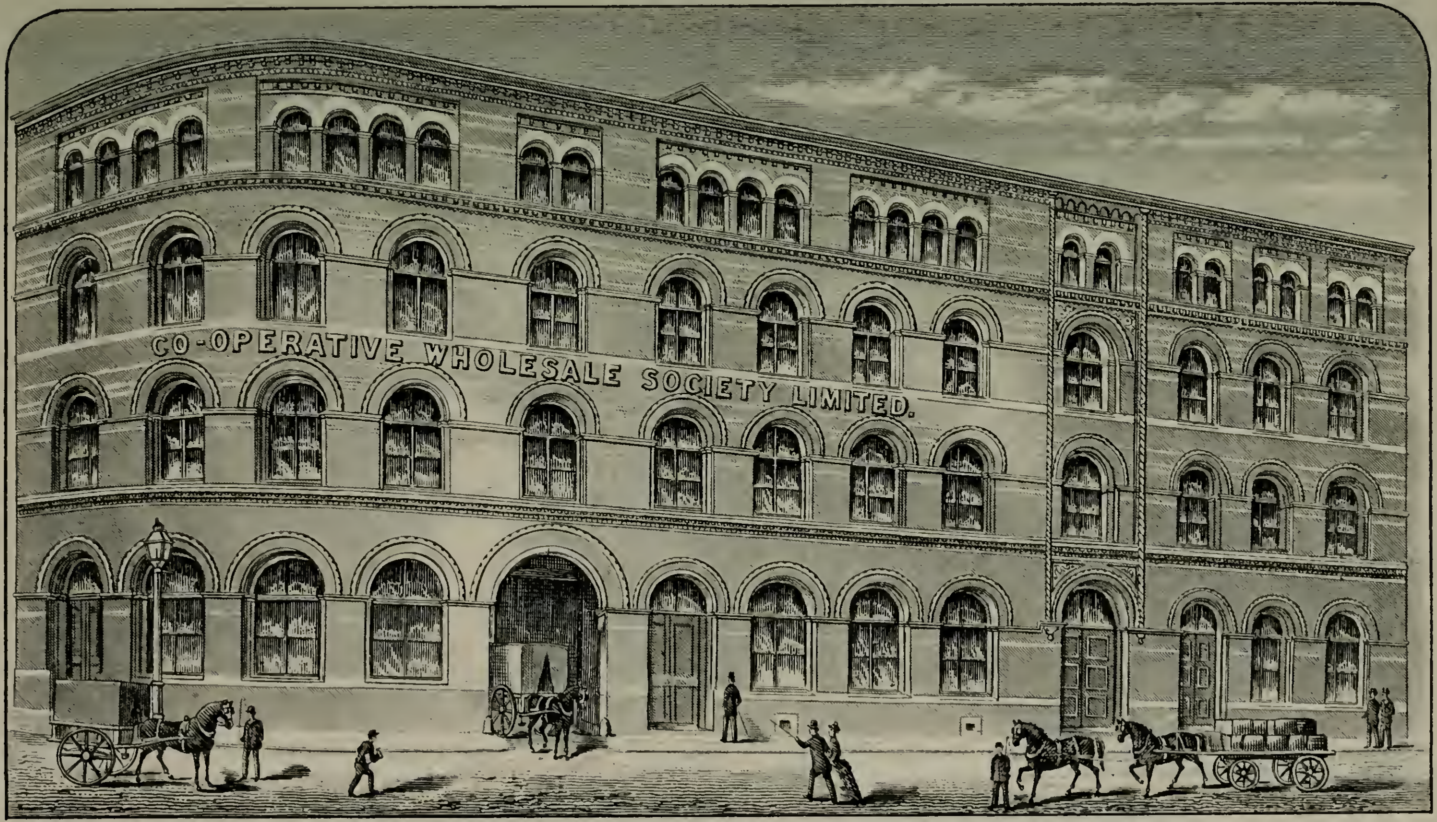


LEEDS, 33, CALL LANE.

PLAN OF LEEDS,

Showing the most Direct Route to the Co-operative Wholesale Society's Saleroom and Clothing Factory, Holbeck, from the Railway Stations and Principal Places.

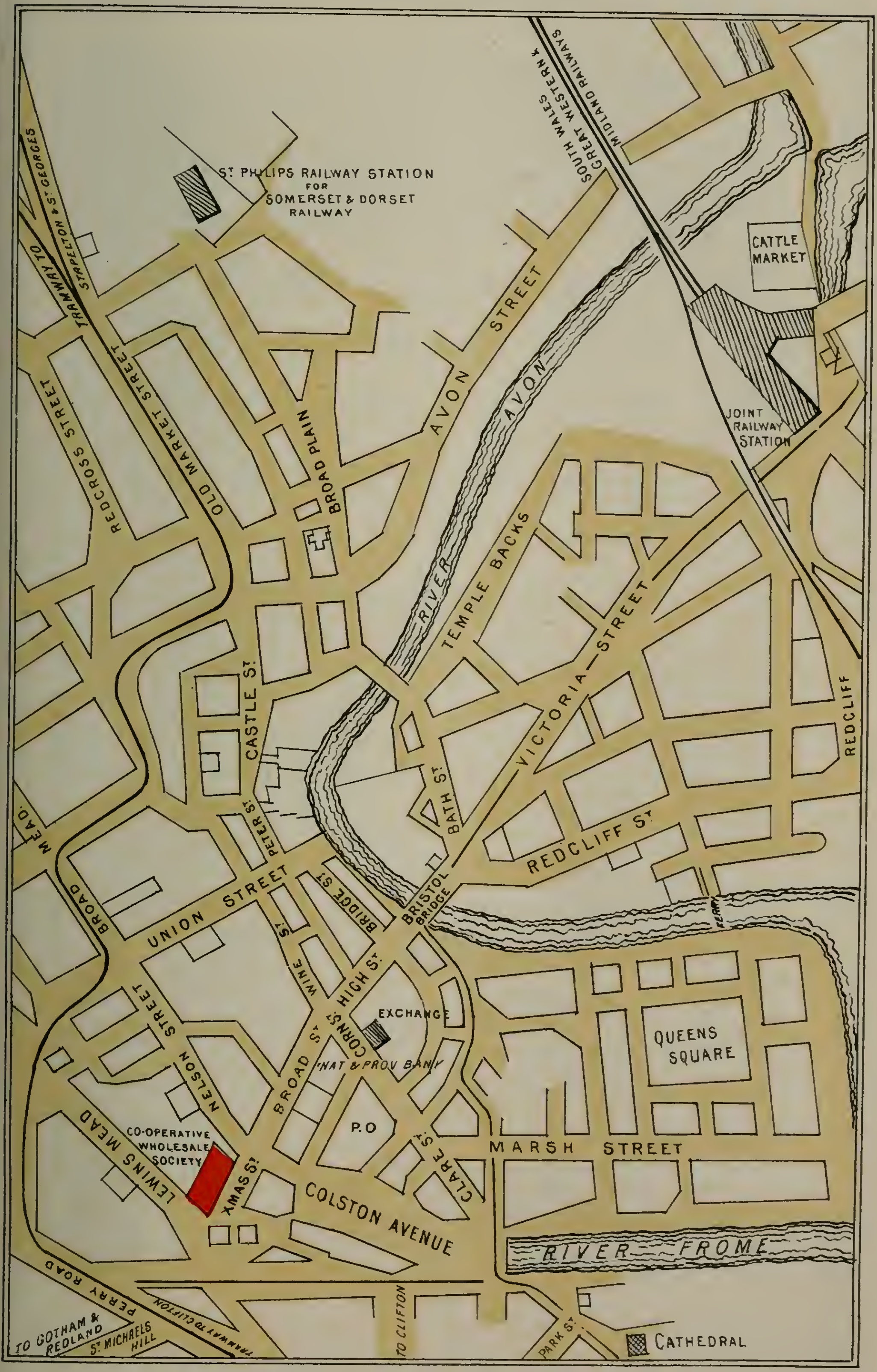



CO-OPERATIVE WHOLESALE SOCIETY LIMITED.

BRISTOL DEPOT, CHRISTMAS STREET.

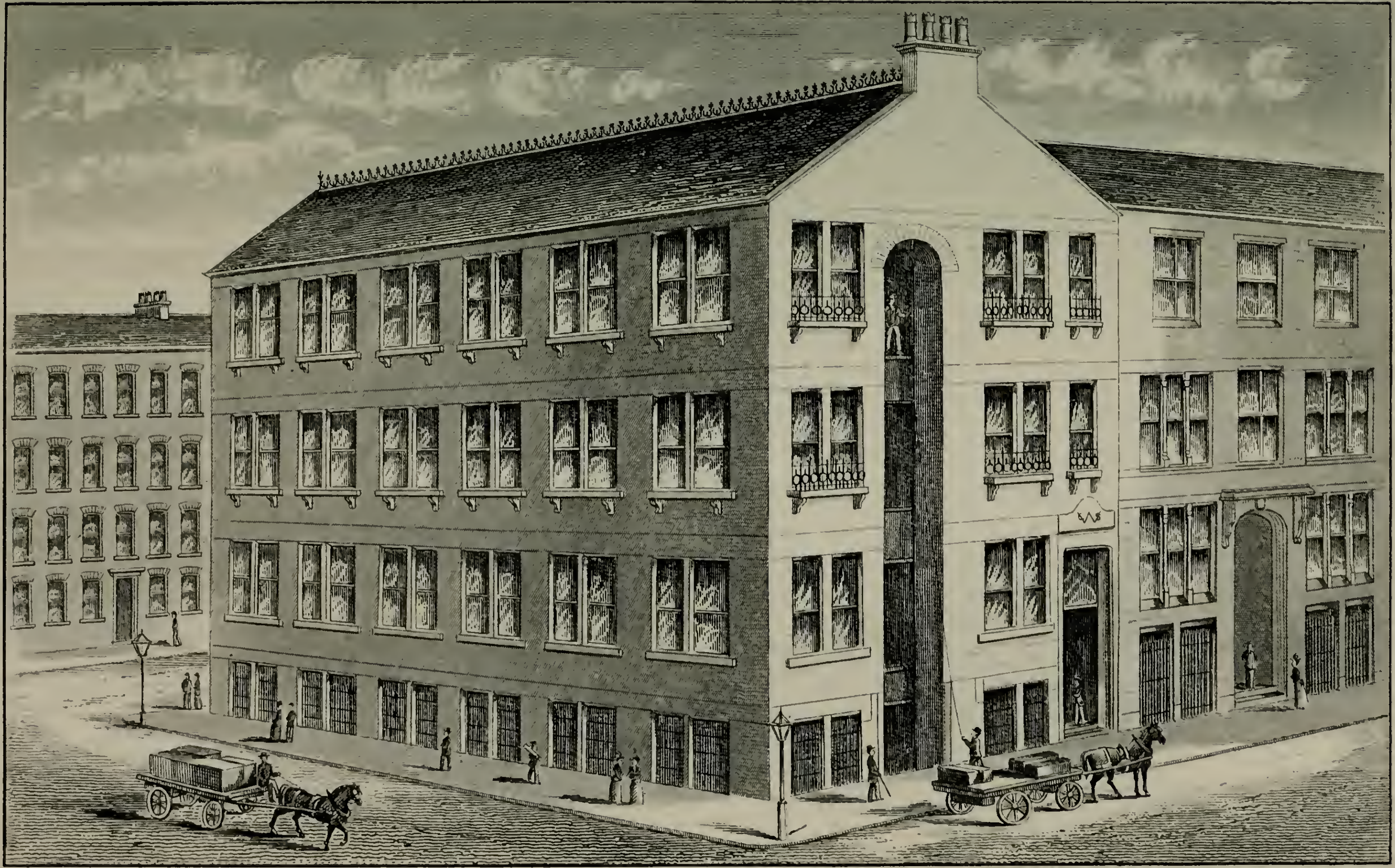
PLAN OF BRISTOL,

SHOWING THE MOST DIRECT ROUTE TO THE CO-OPERATIVE WHOLESALE SOCIETY'S DEPOTS FROM THE PRINCIPAL RAILWAY STATIONS.



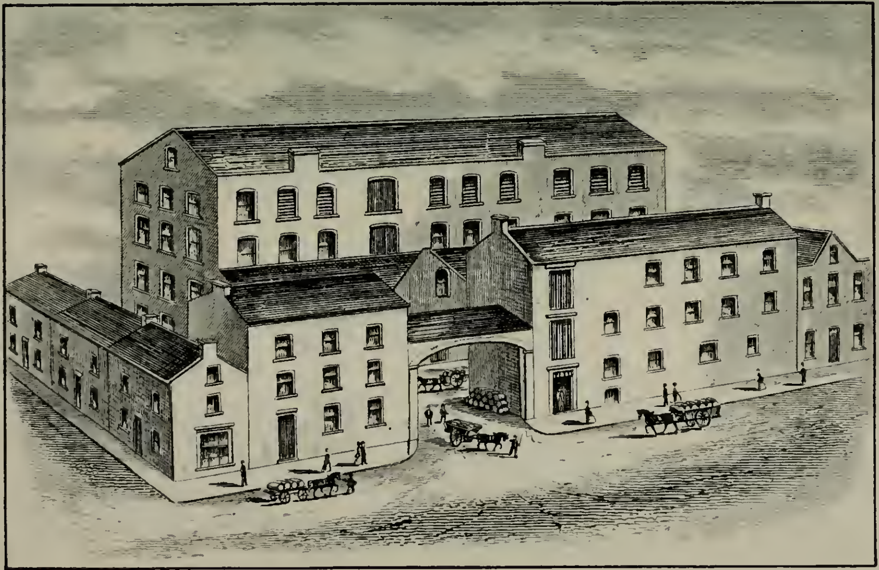
CO-OPERATIVE WHOLESALE SOCIETY LIMITED.
CO-OPERATIVE WHOLESALE SOCIETY LIMITED.

LIVERPOOL WAREHOUSES, TEMPLE LANE. OFFICE—7, VICTORIA STREET



LIVERPOOL GREEN FRUIT WAREHOUSE, CUMBERLAND STREET.

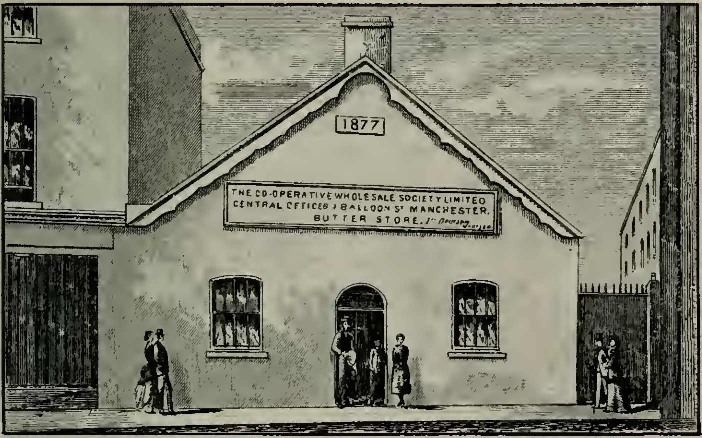
NEW YORK PRODUCE EXCHANGE, BROADWAY, NEW YORK,
IN WHICH THE SOCIETY'S OFFICES ARE SITUATE.



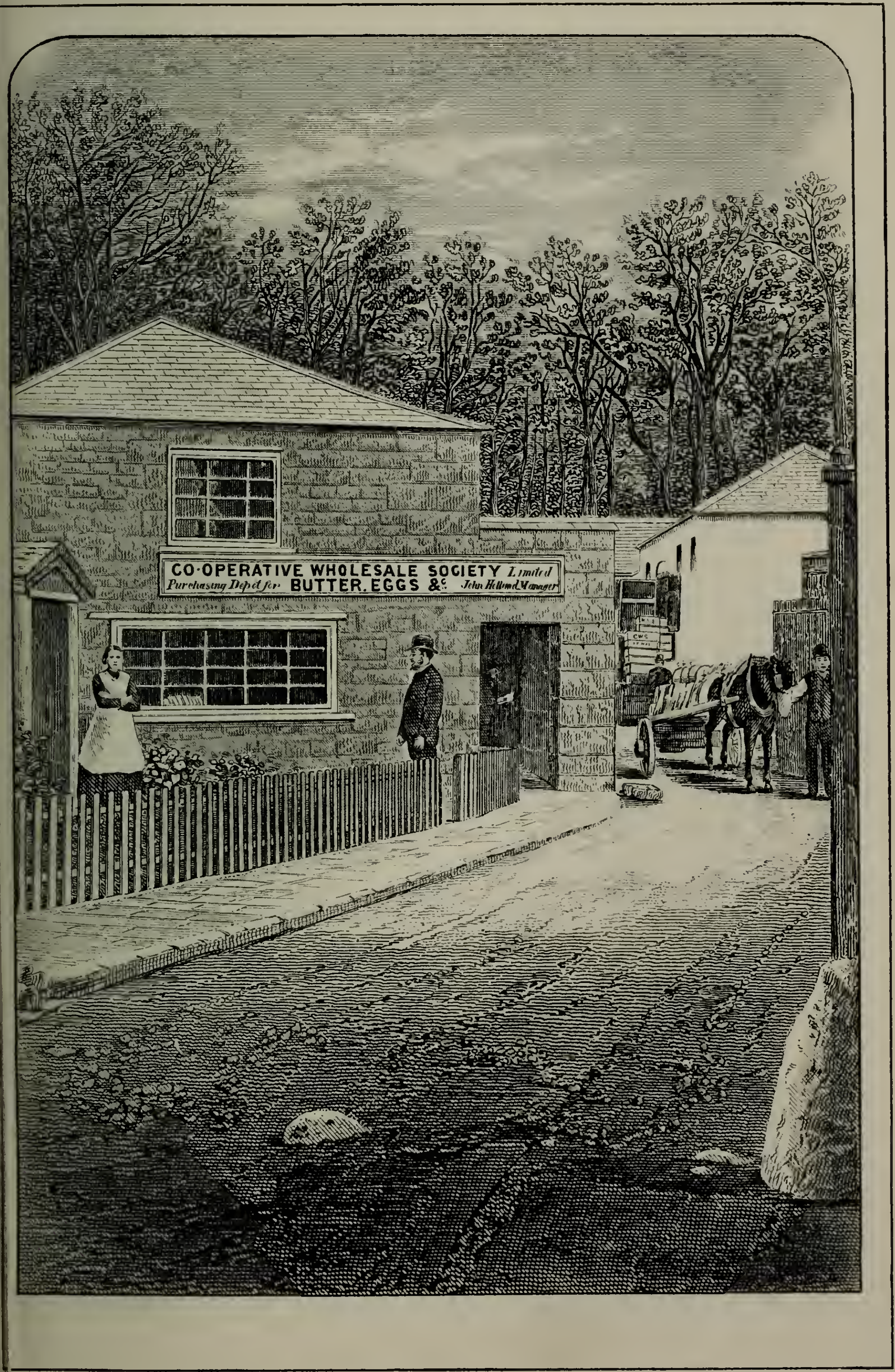
CORK BRANCH,
JOHN STREET, CORK, IRELAND.

THE CO-OPERATIVE WHOLESALE SOCIETY Limited
HEAD OFFICE No 1 BALLOON St MANCHESTER
Agent WILLIAM L. STOKES

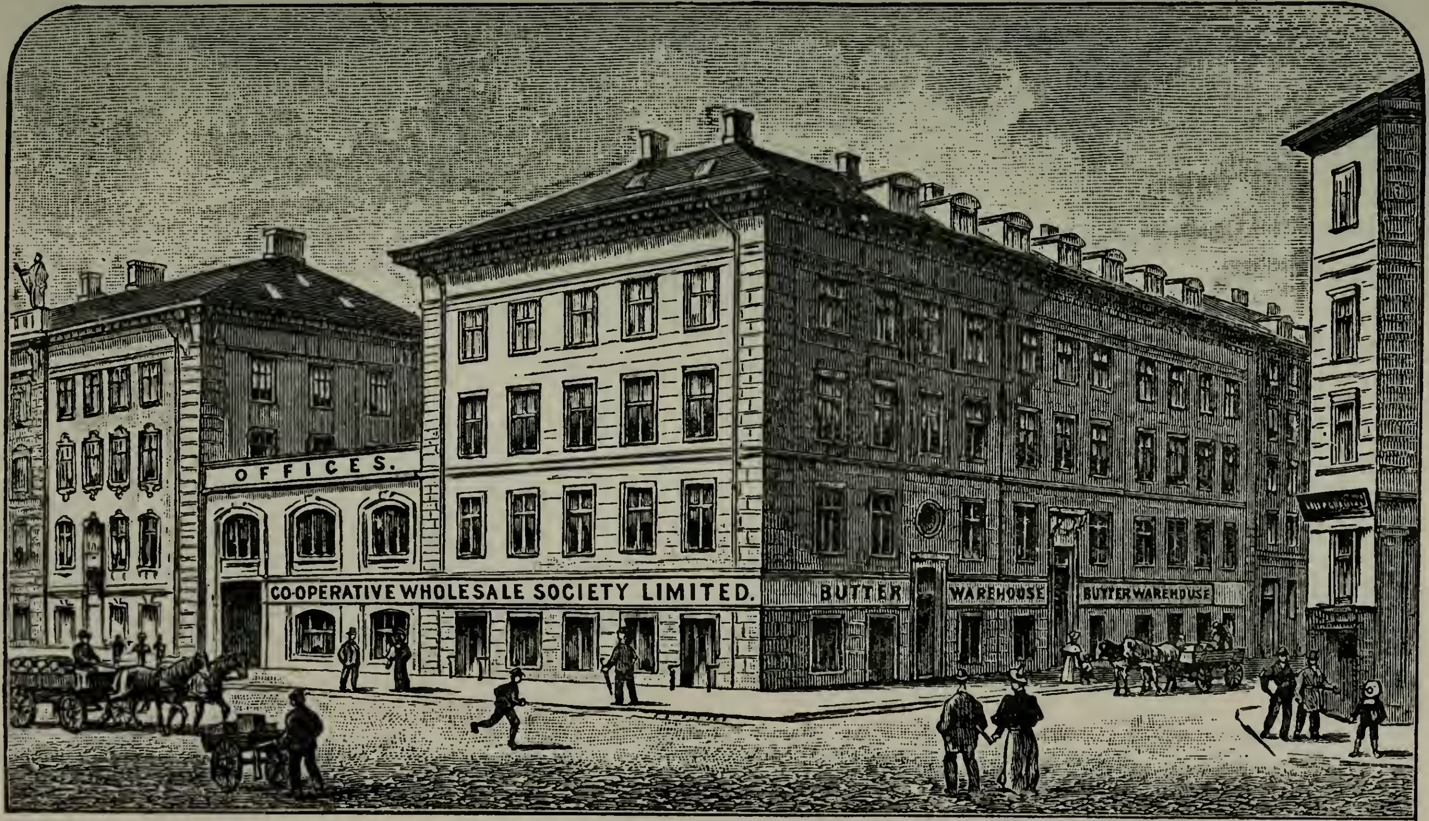
LIMERICK BRANCH,
MULGRAVE STREET, LIMERICK, IRELAND.


1877
THE CO-OPERATIVE WHOLESALE SOCIETY LIMITED
CENTRAL OFFICES 1 BALLOON ST MANCHESTER.
BUTTER STORE.

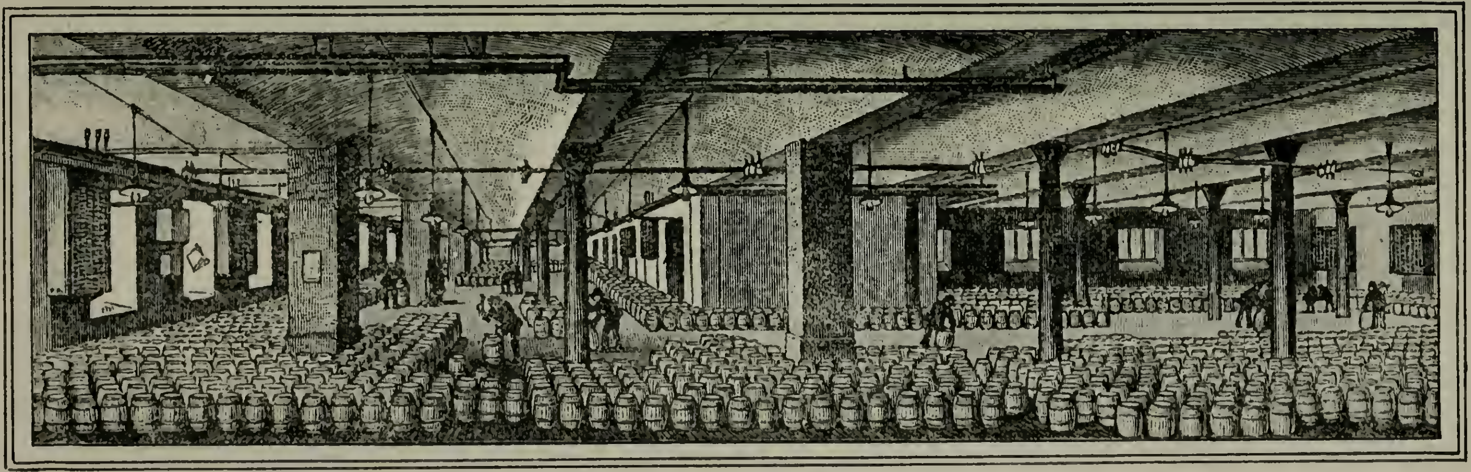
TRALEE BRANCH,
TRALEE, IRELAND.


CO-OPERATIVE WHOLESALE SOCIETY Limited
Purchasing Depot for BUTTER, EGGS &c.
John Holland Manager
CWS

ARMAGH BRANCH



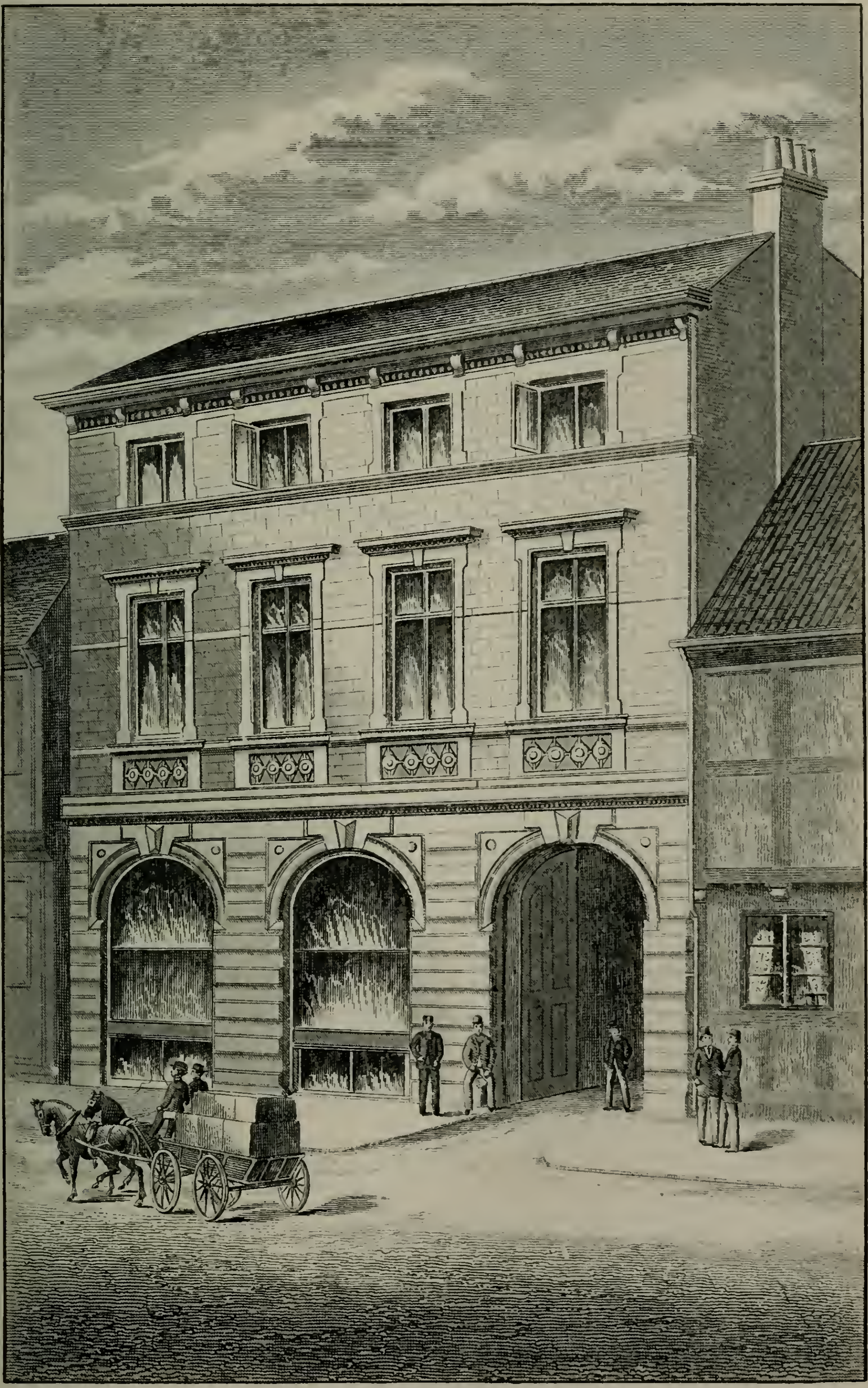
COPENHAGEN BRANCH,
SCT. ANNAPLADS, 24.



COPENHAGEN BRANCH. BUTTER STORE

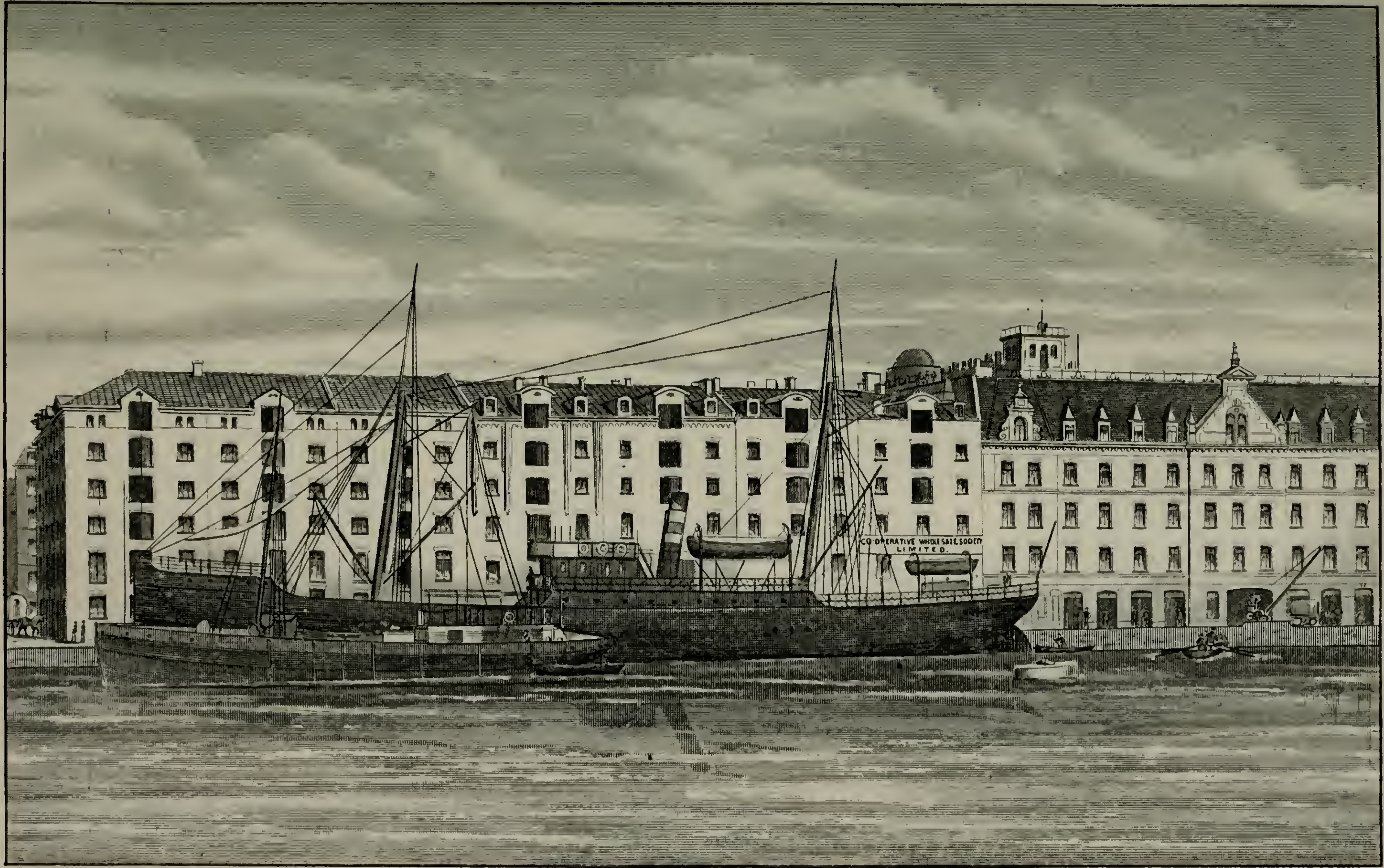
HAMBURG BRANCH,

"Luisenhof" Neue Groninger Str., in which the Society's Office is situate

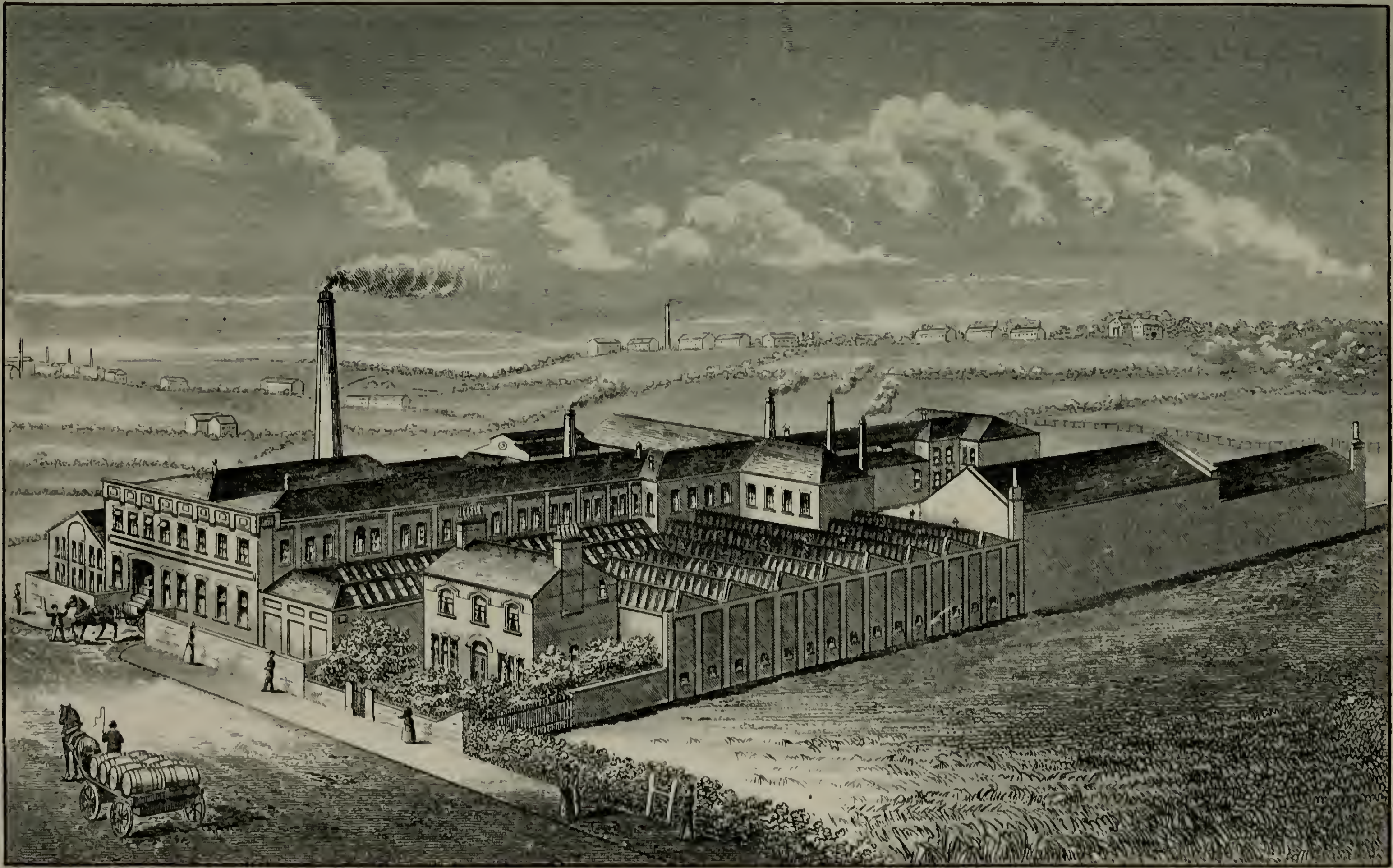


AARHUS BRANCH Denmark

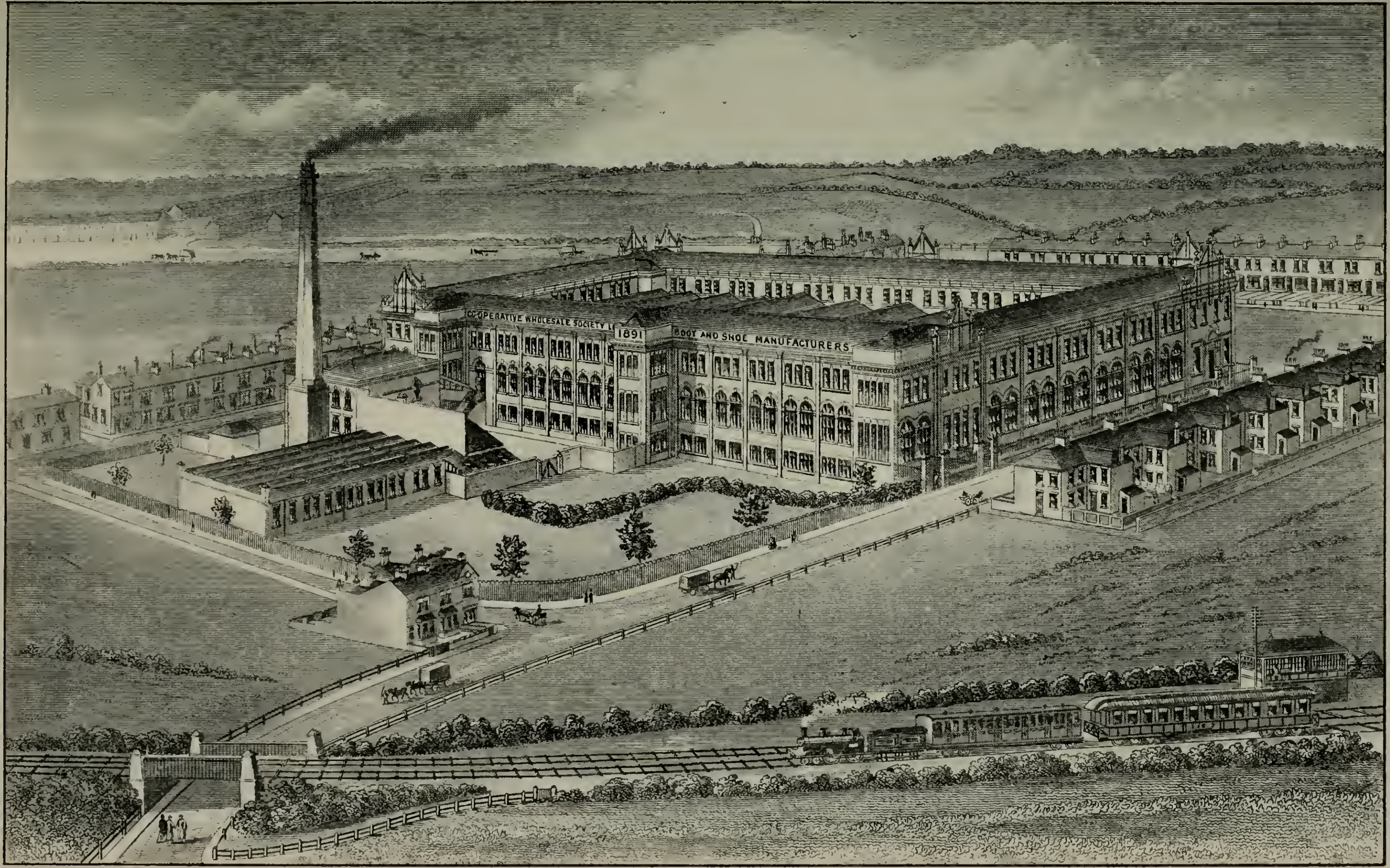
BUTTER CELLAR, AARHUS, DENMARK.



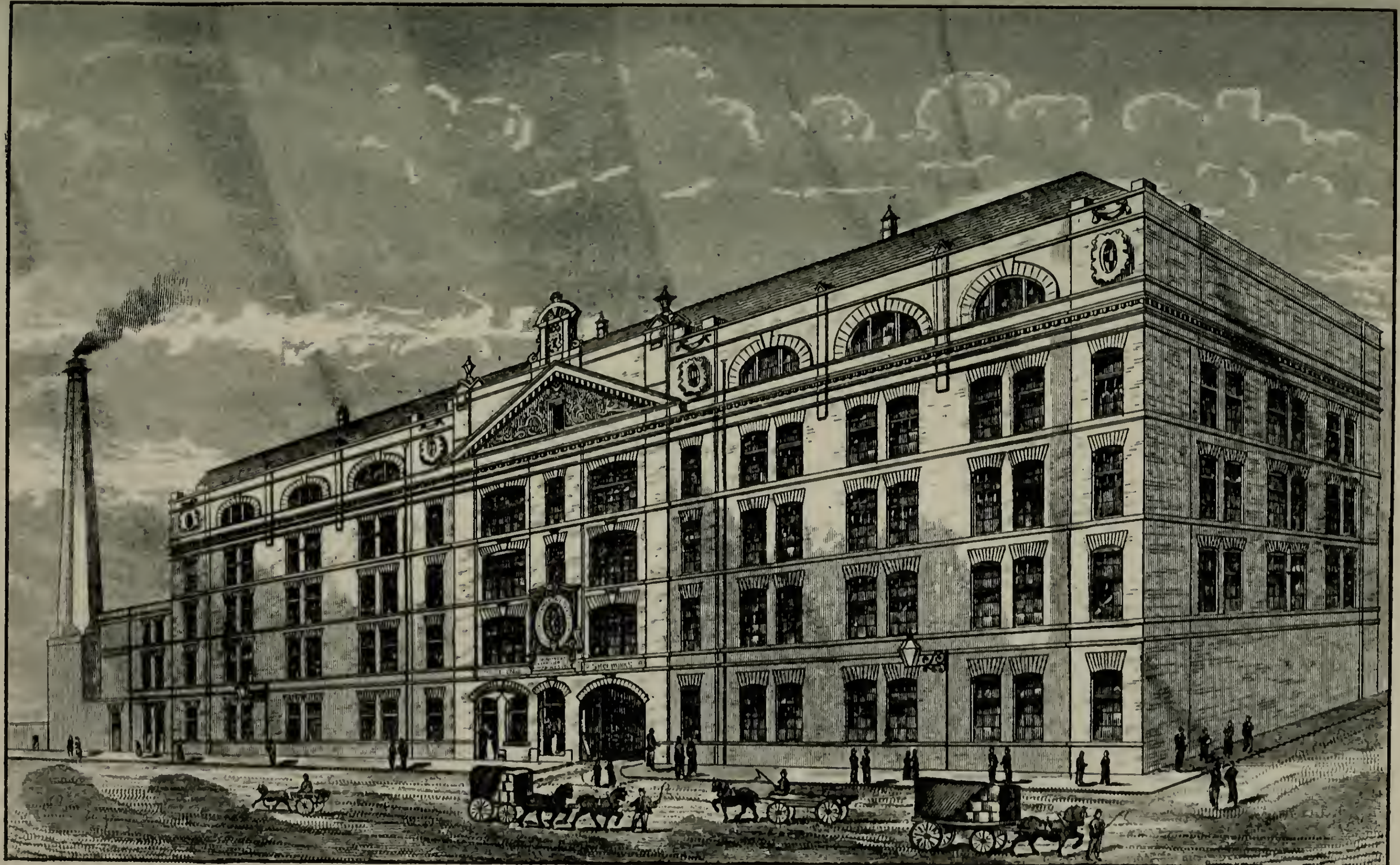
GOTHENBURG BRANCH, MAGAZINSKVARTERET.



CRUMPSALL BISCUIT WORKS, *(See pages 32 and 80)*


CO-OPERATIVE WHOLESALE SOCIETY L
1891
BOOT AND SHOE MANUFACTURERS

WHEATSHEAF BOOT AND SHOE WORKS, KNIGHTON FIELDS, LEICESTER.
(See pages 34 and 82.)

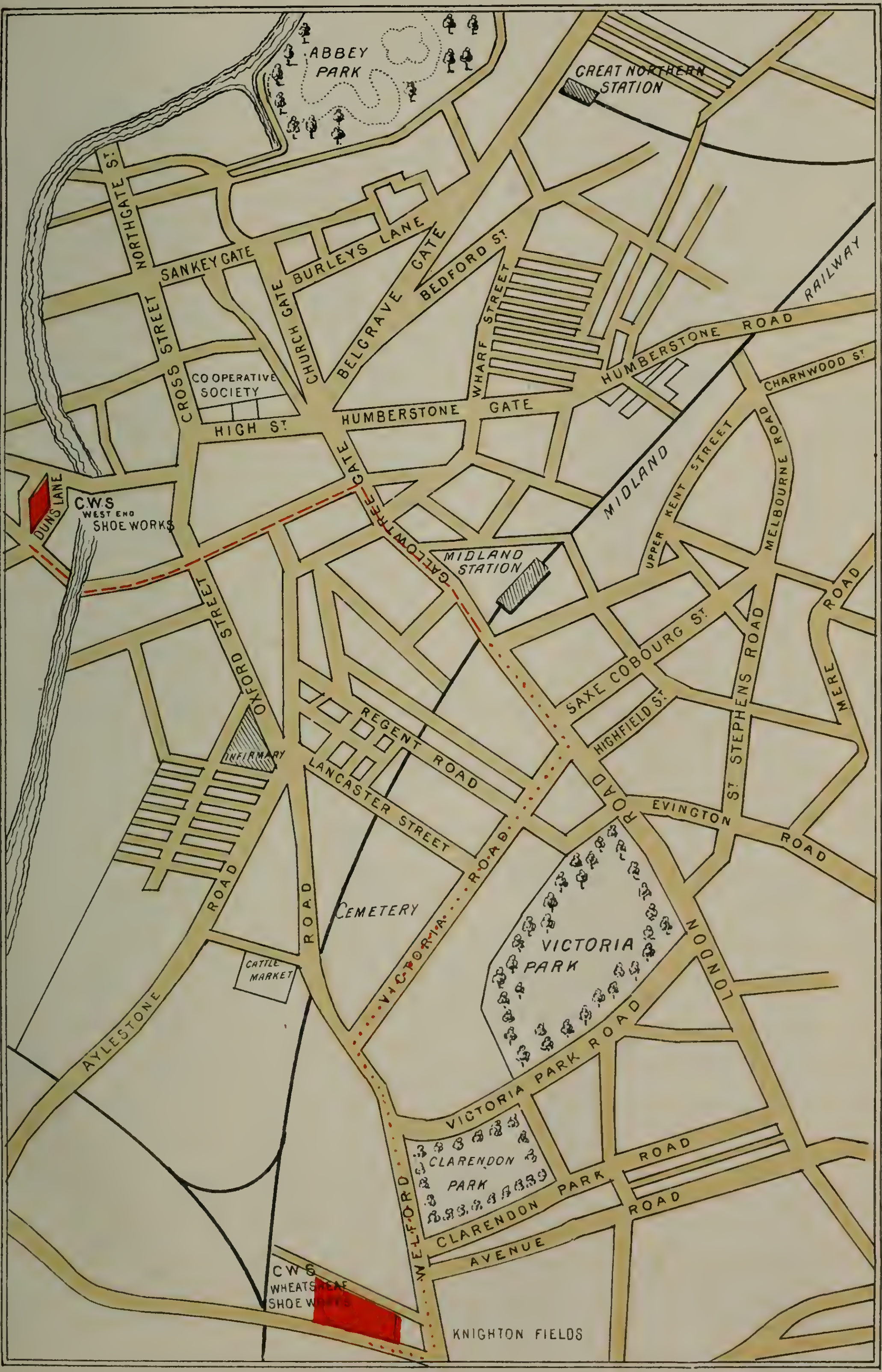


LEICESTER BOOT AND SHOE WORKS, DUNS LANE.

(See pages 34 and 82.)

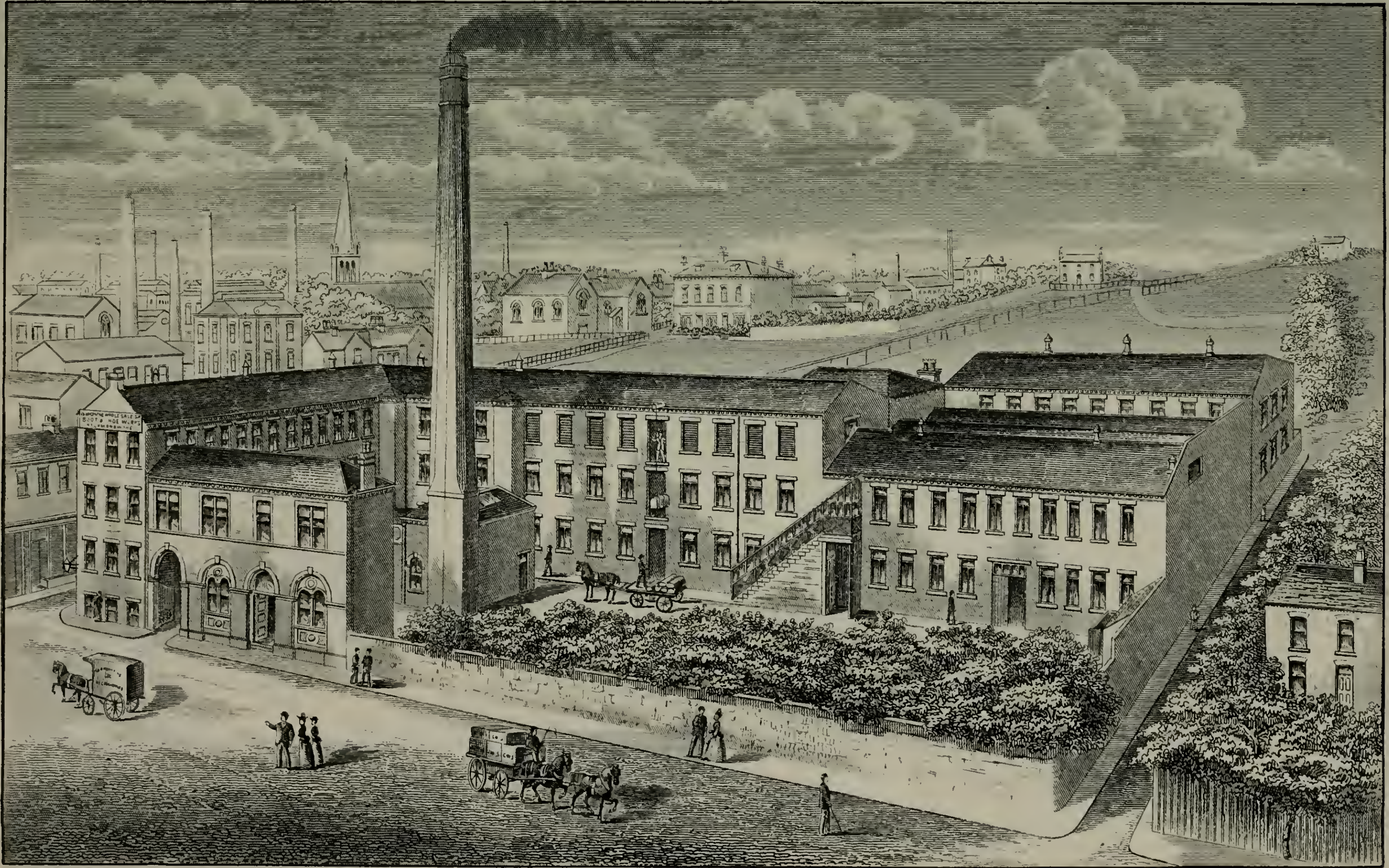
PLAN OF LEICESTER,

Showing the most Direct Route to the Co-operative Wholesale Society's Boot and Shoe Works from the Railway Stations and Principal Places.



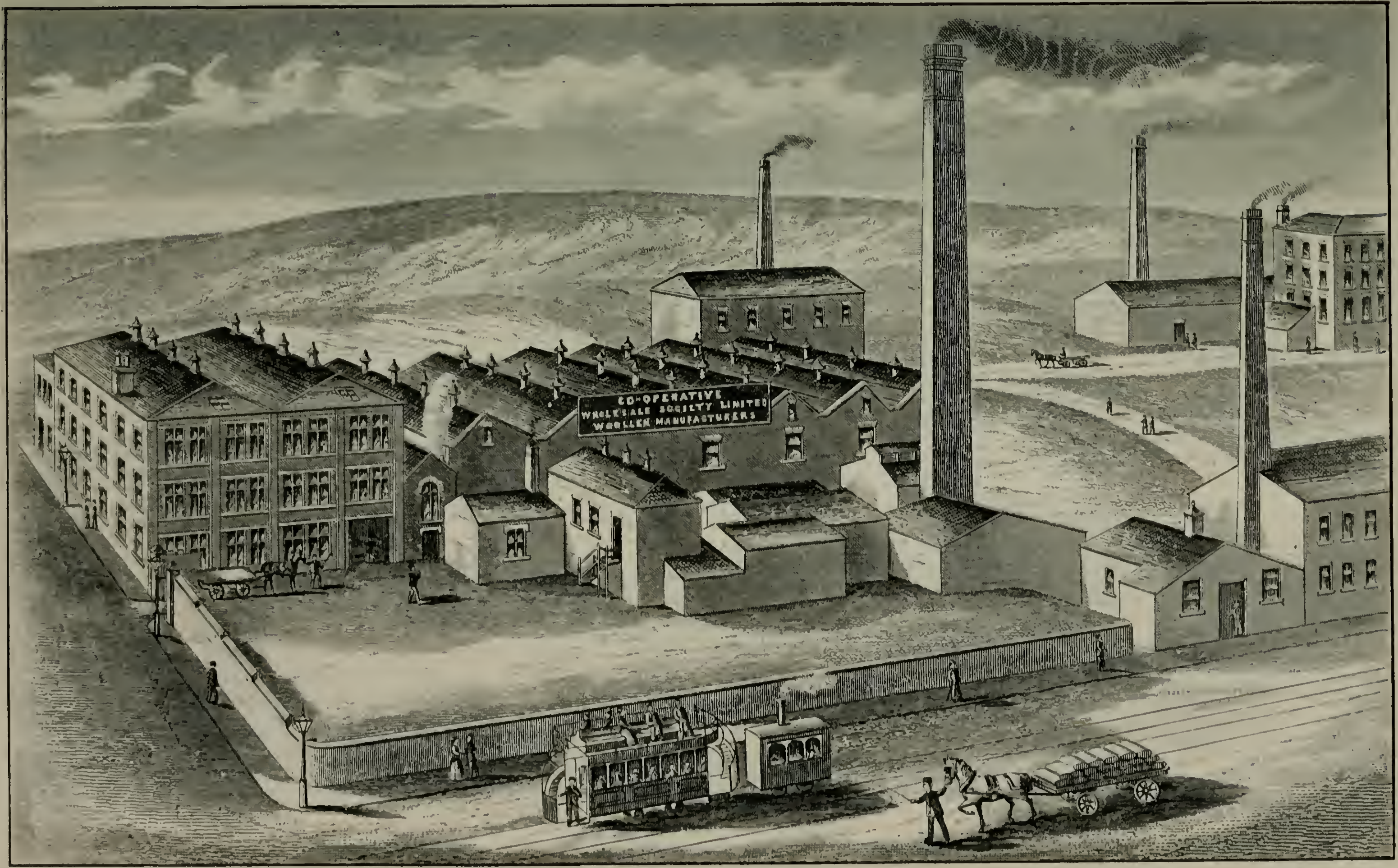
- - - - - - - - - - - To West End Works.

. . . . „ Wheatsheaf Works.

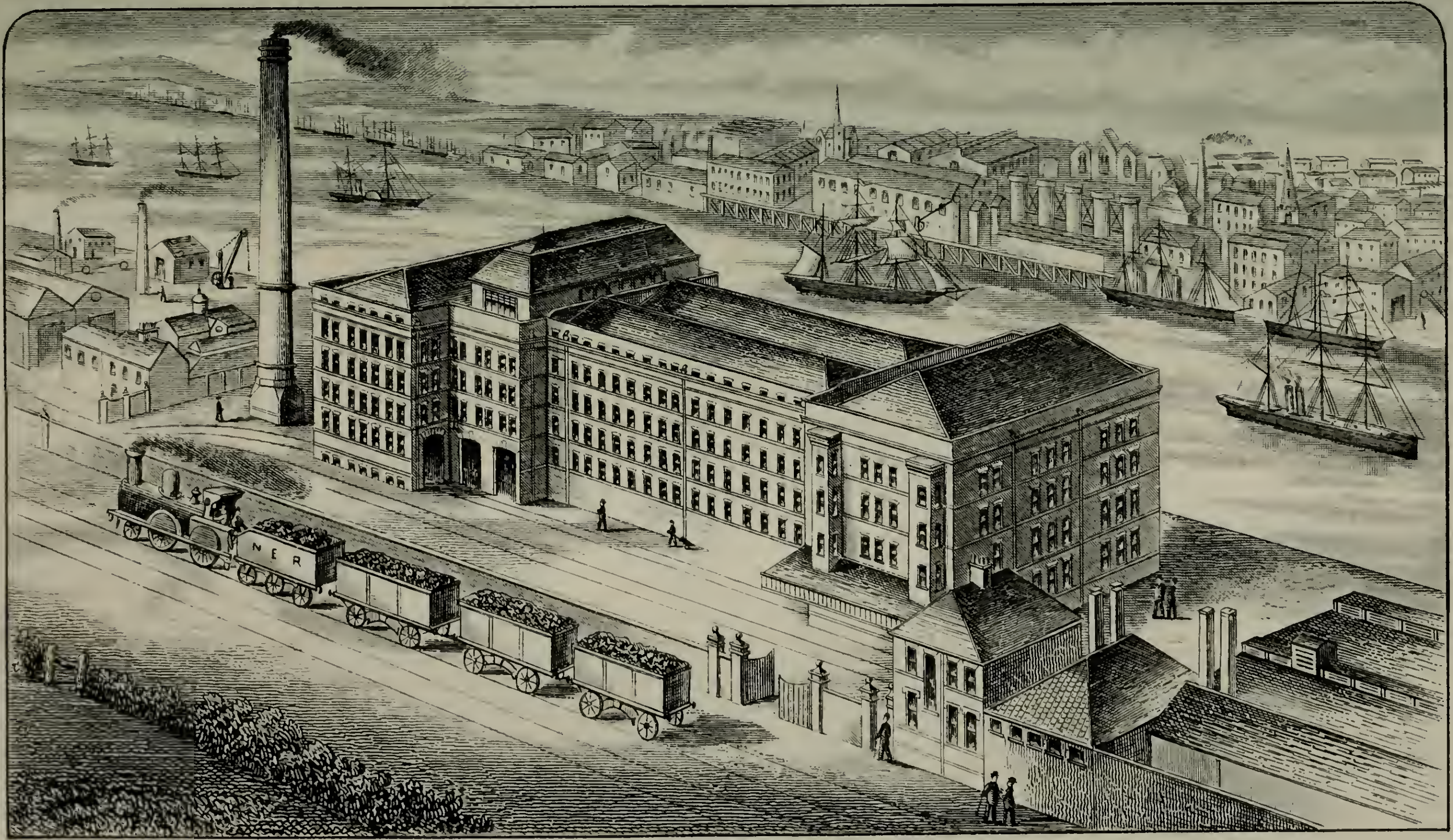


HECKMONDWIKE BOOT AND SHOE AND CURRYING WORKS.

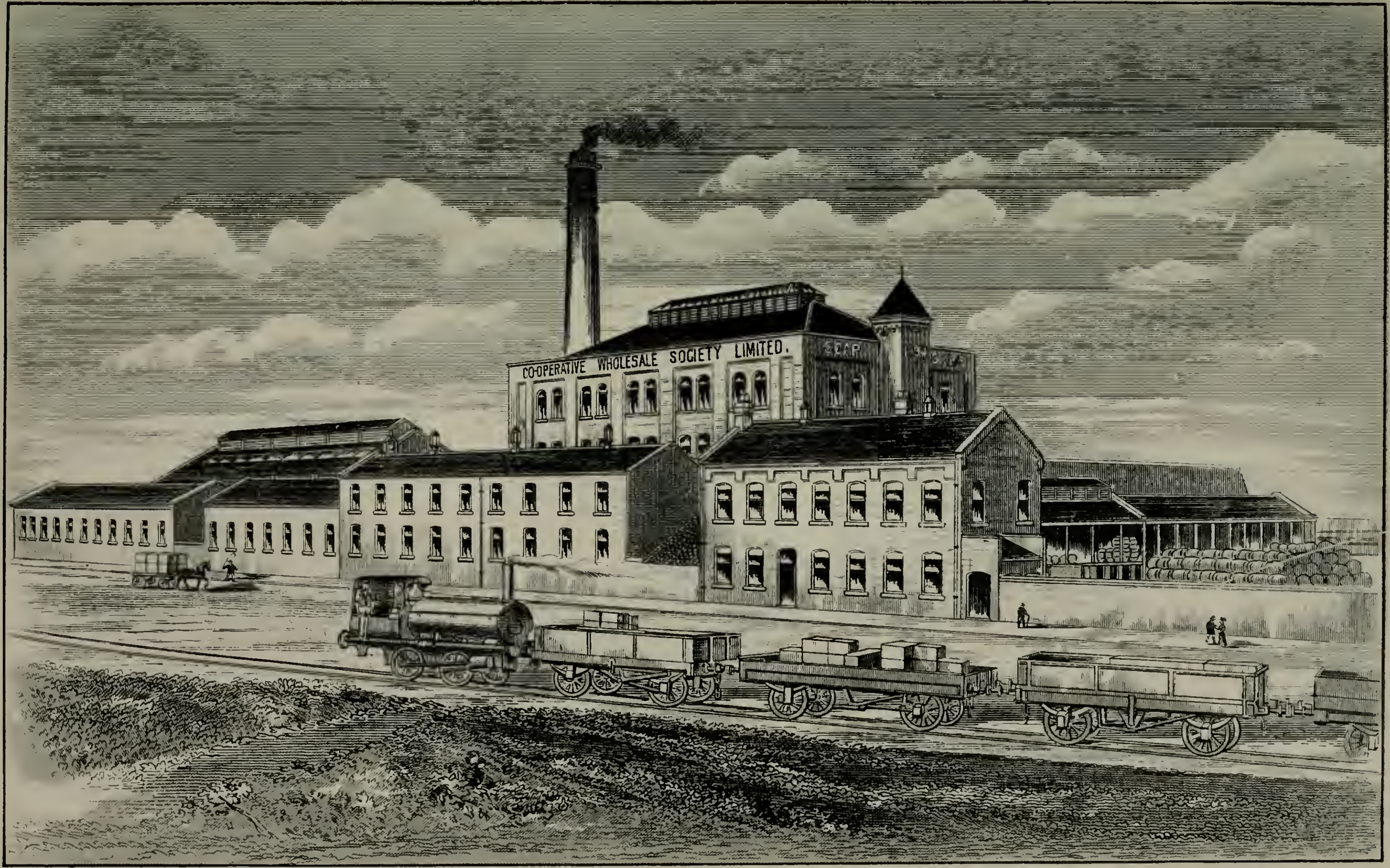
(See pages 39 and 84.)



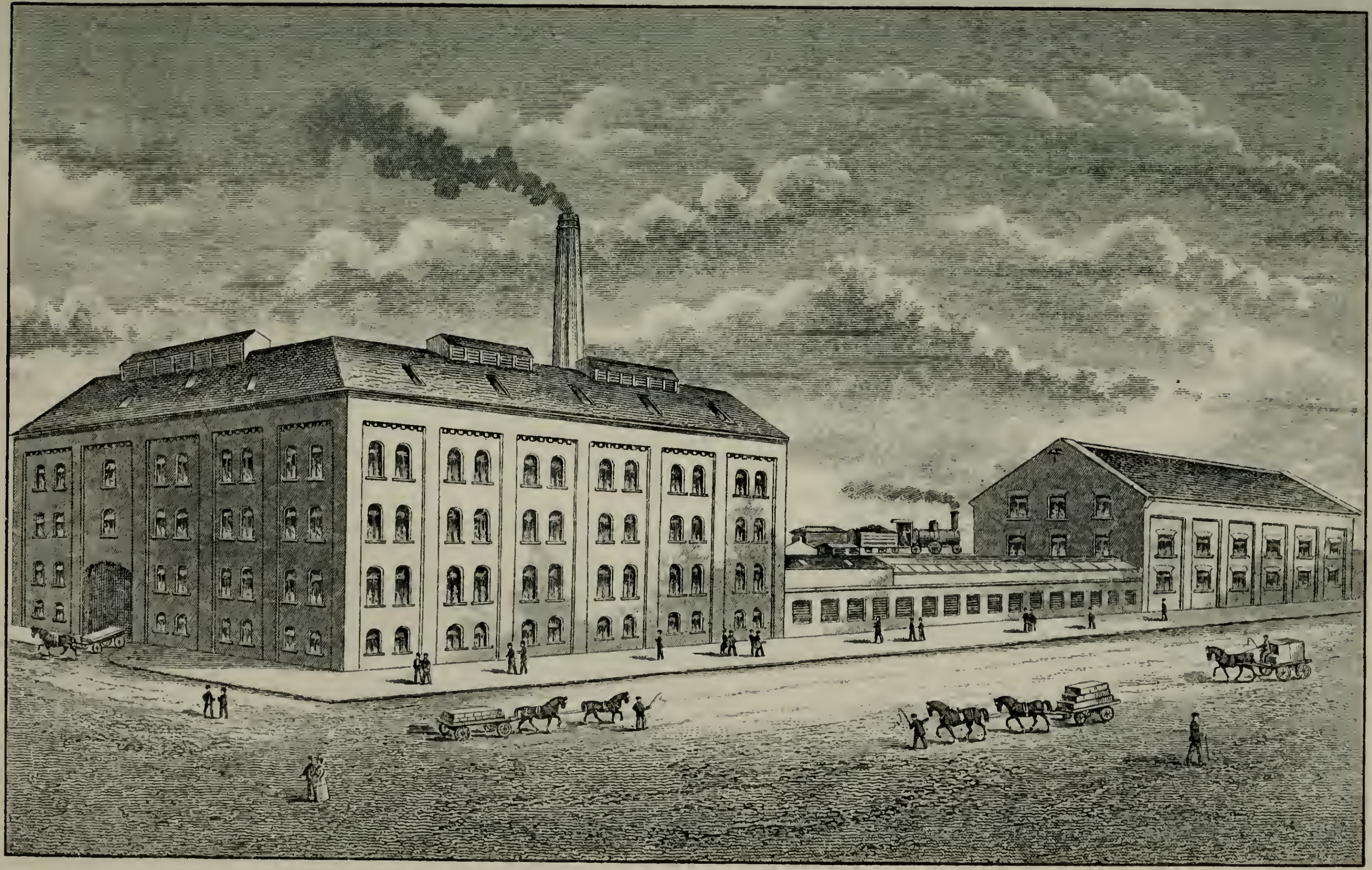
LIVINGSTONE MILL, BATLEY. WOOLLEN CLOTH WORKS.
(See pages 44 and 90.)



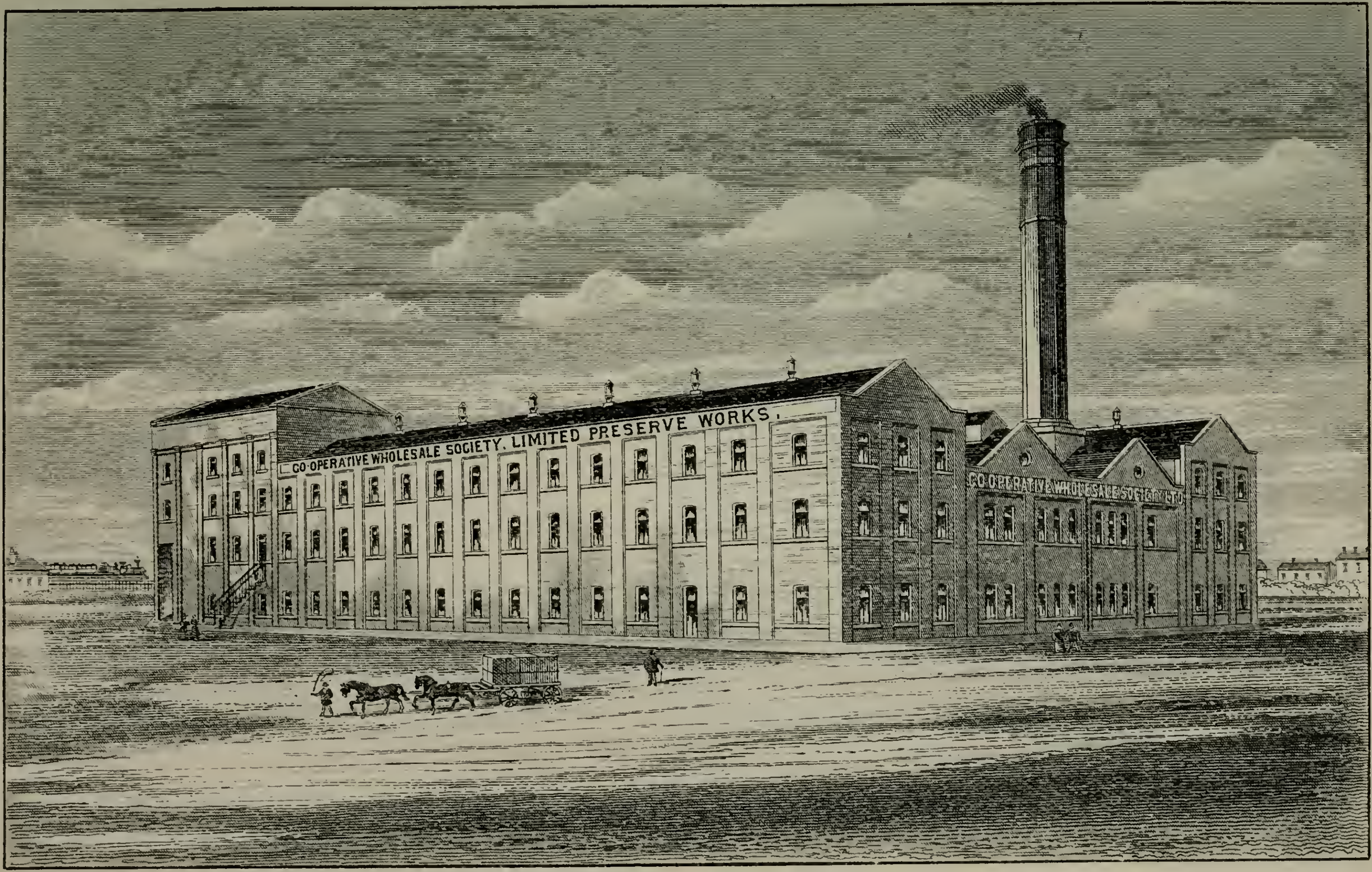
DUNSTON CORN MILL.
(See pages 40 and 87.)



IRLAM SOAP WORKS. *(See pages 41 and 88.)*



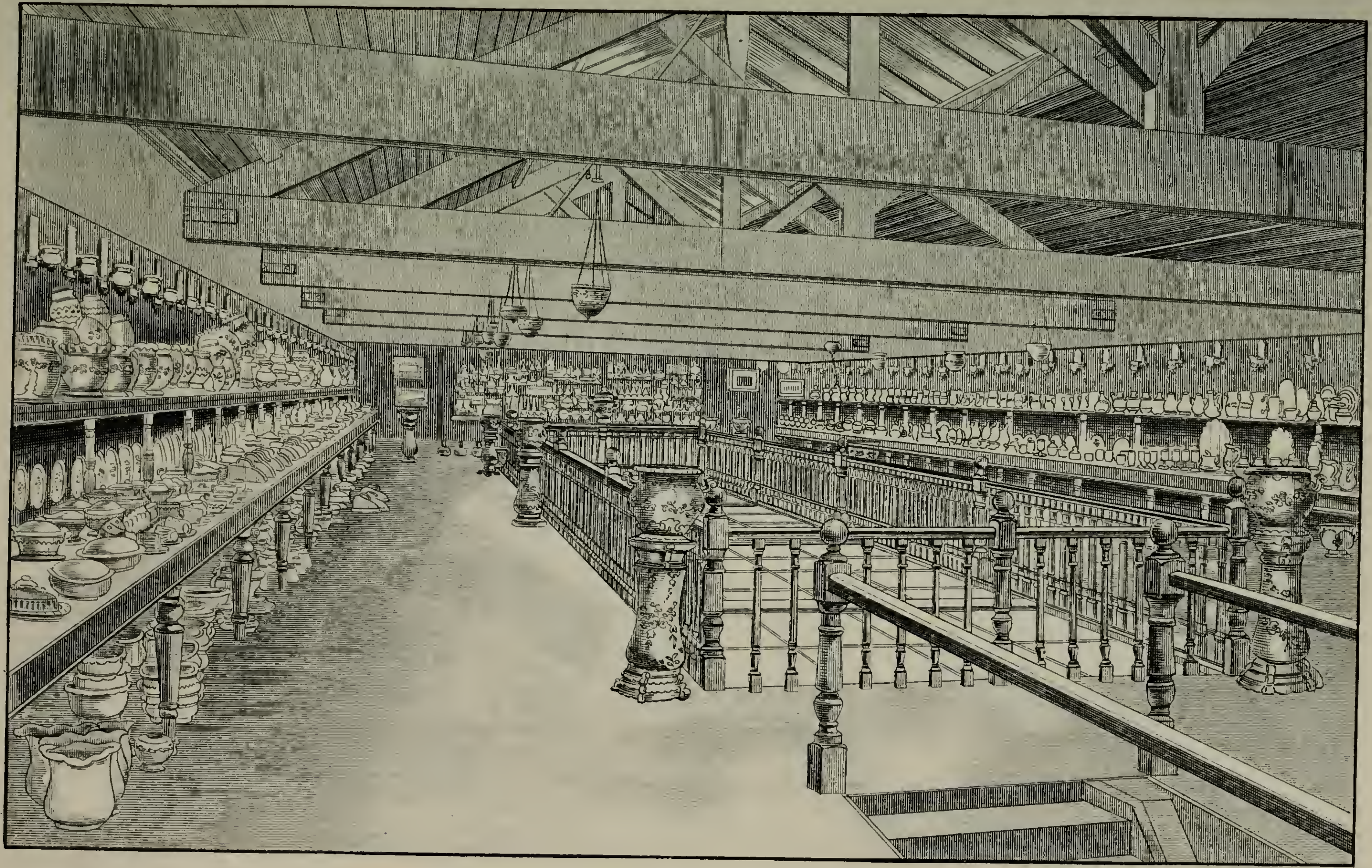
HARTLEPOOLS LARD FACTORY. *(See page 42.)*


CO-OPERATIVE WHOLESALE SOCIETY. LIMITED PRESERVE WORKS.
CO-OPERATIVE WHOLESALE SOCIETY LTD.

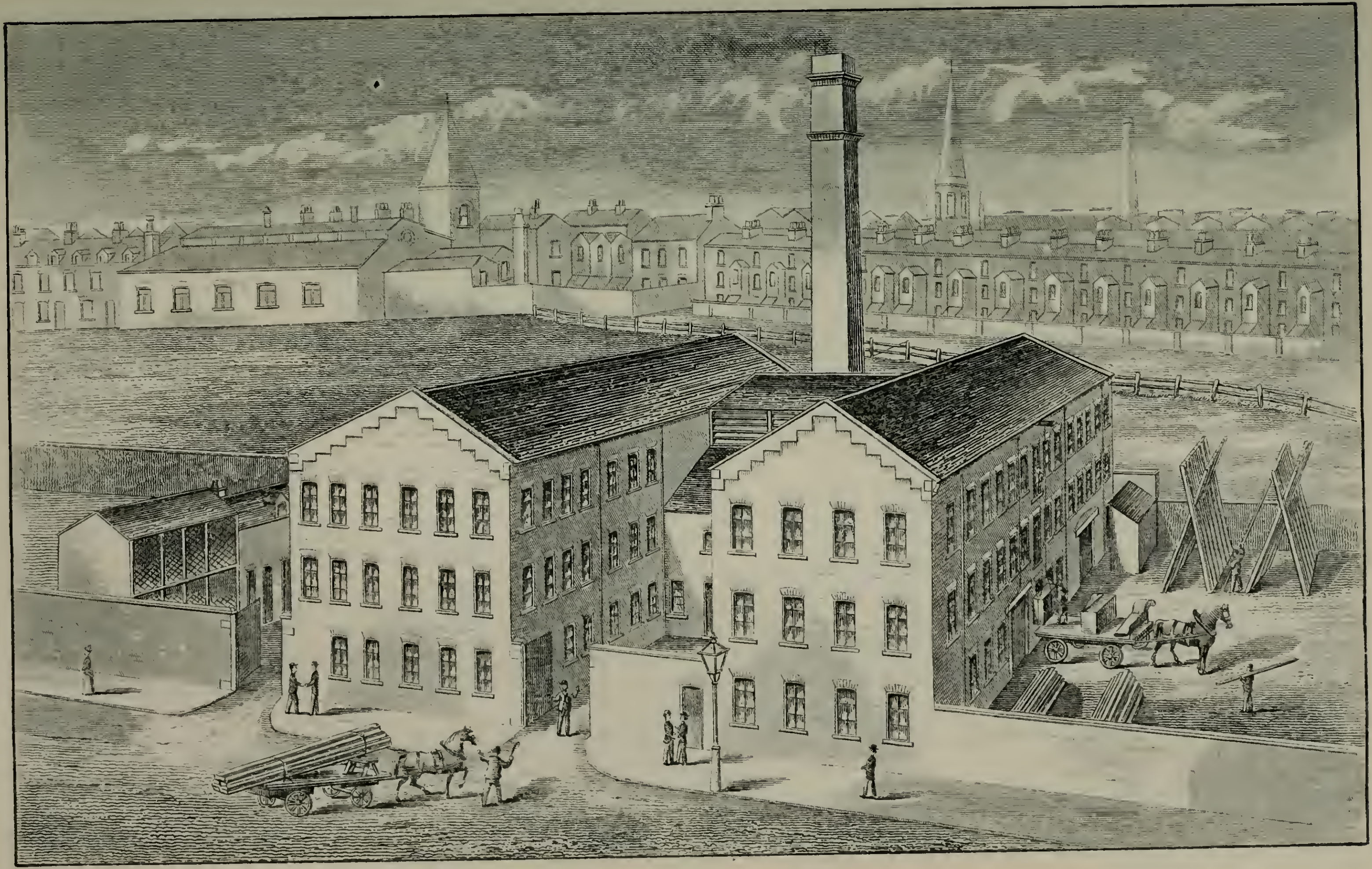
MIDDLETON PRESERVE WORKS. *(See page 43.)*

CROCKERY DEPOT
COOPERATIVE WHOLESALE SOCIETY LTD
Central Offices, 1 Balloon Street, Manchester.

LONGTON CROCKERY DEPÔT.
(*See pages 31 and 94.*)

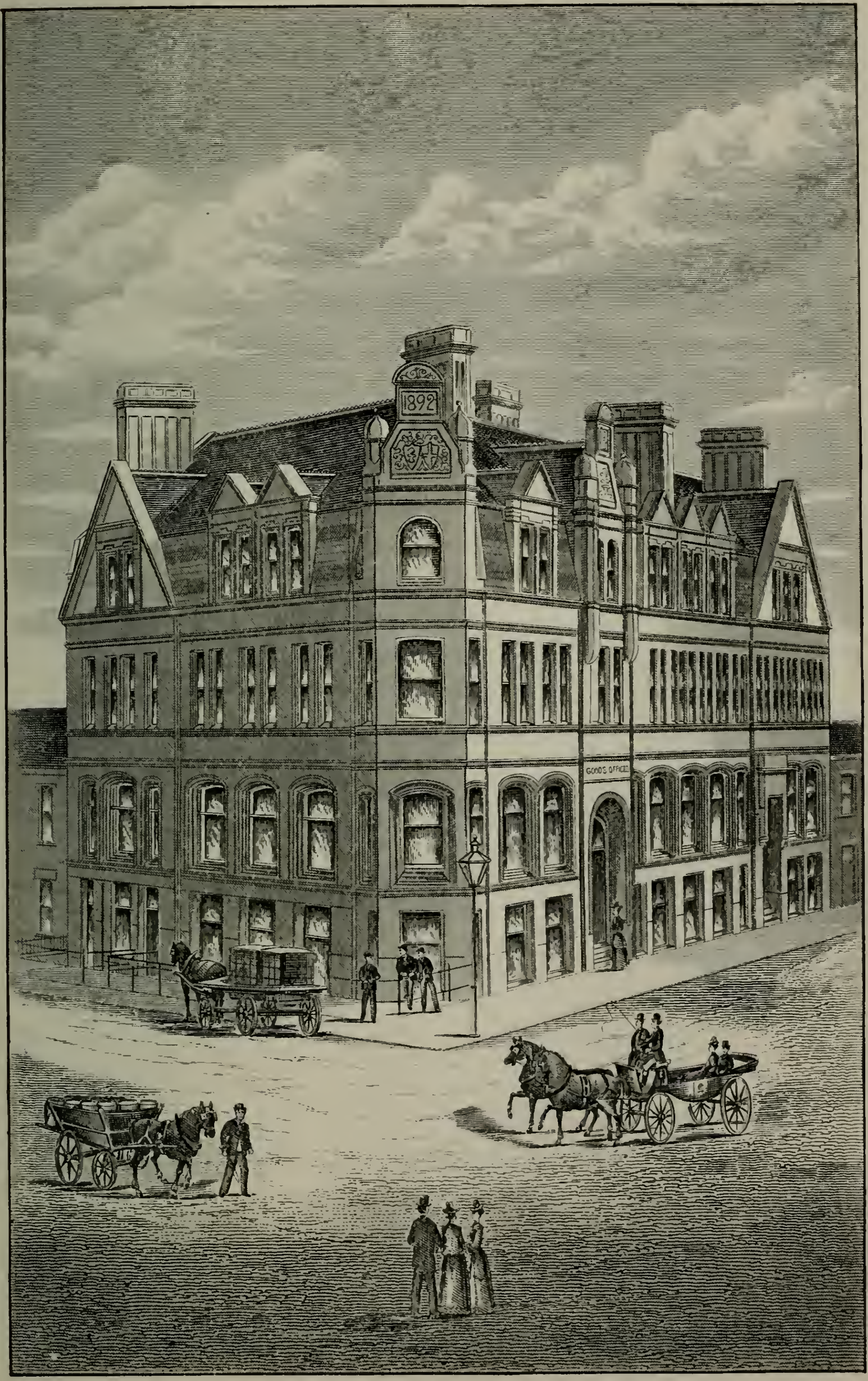


LONGTON CROCKERY DEPÔT. SHOW ROOM. *(See pages 31 and 94.)*

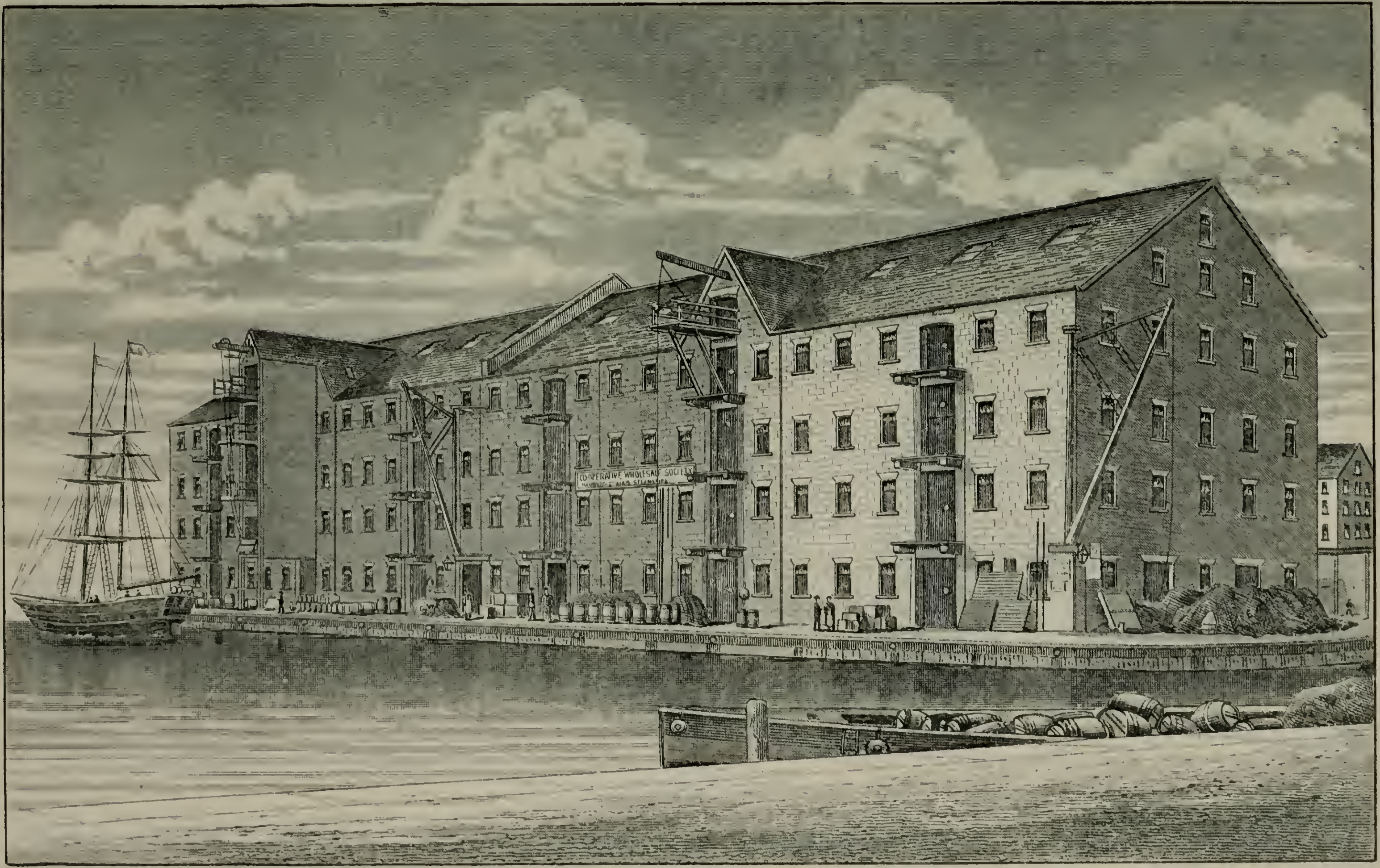


FURNITURE AND READY-MADES FACTORY, BROUGHTON, NEAR MANCHESTER.

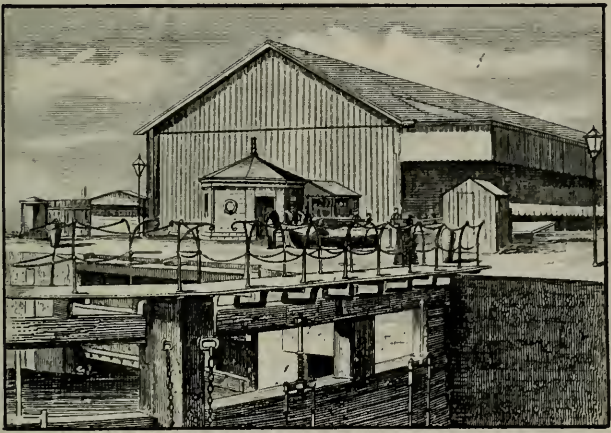
(See pages 28 and 81.)



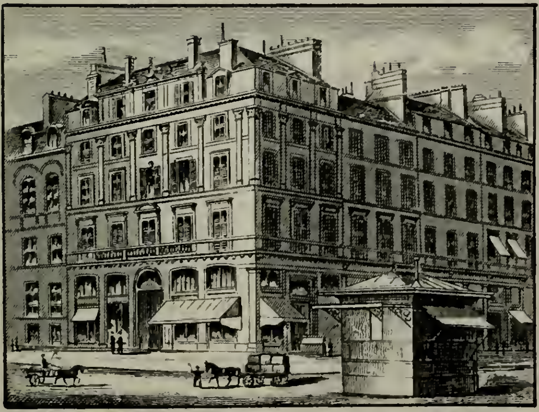
GOOLE OFFICES, STANHOPE STREET.



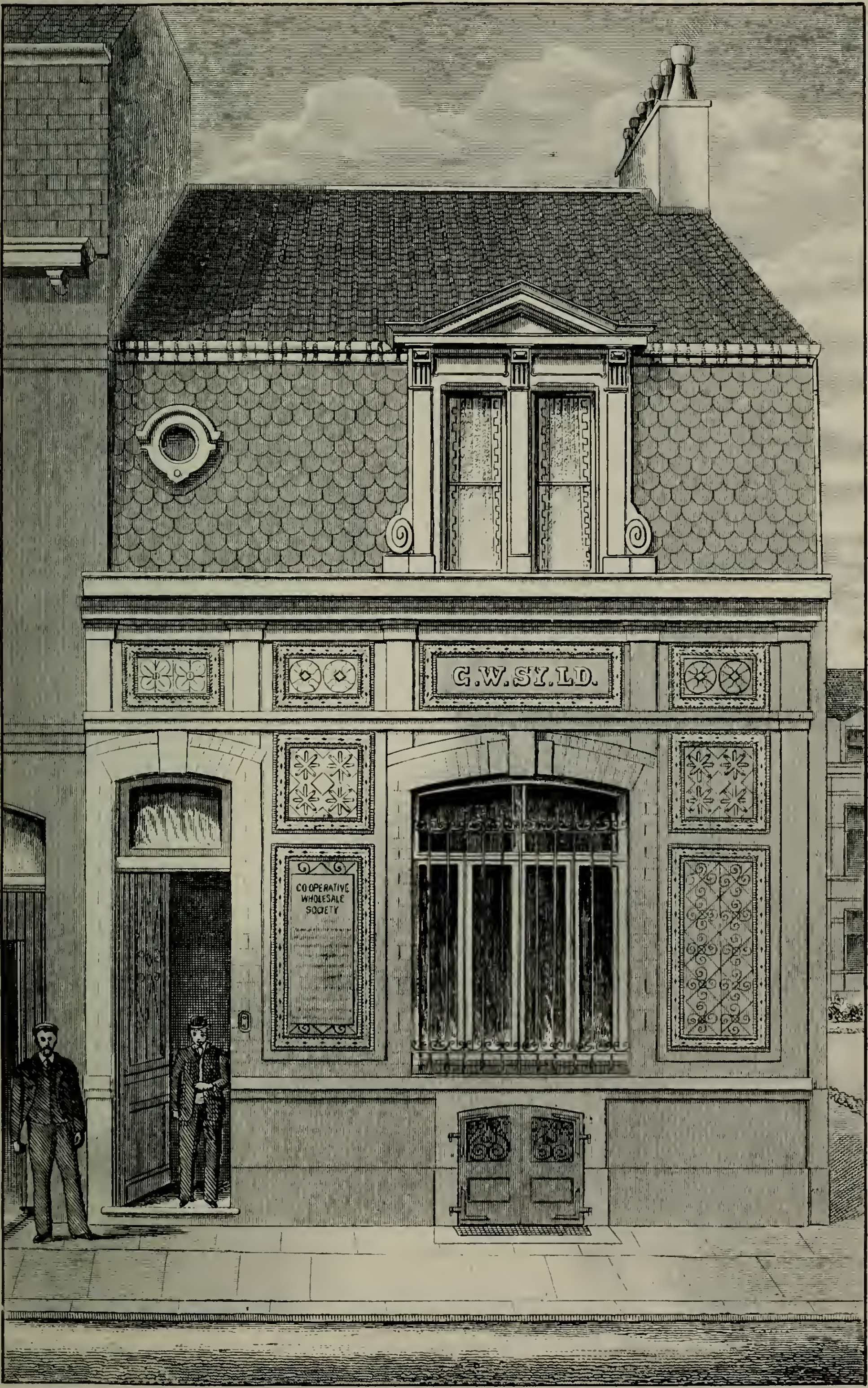
GOOLE WAREHOUSE.



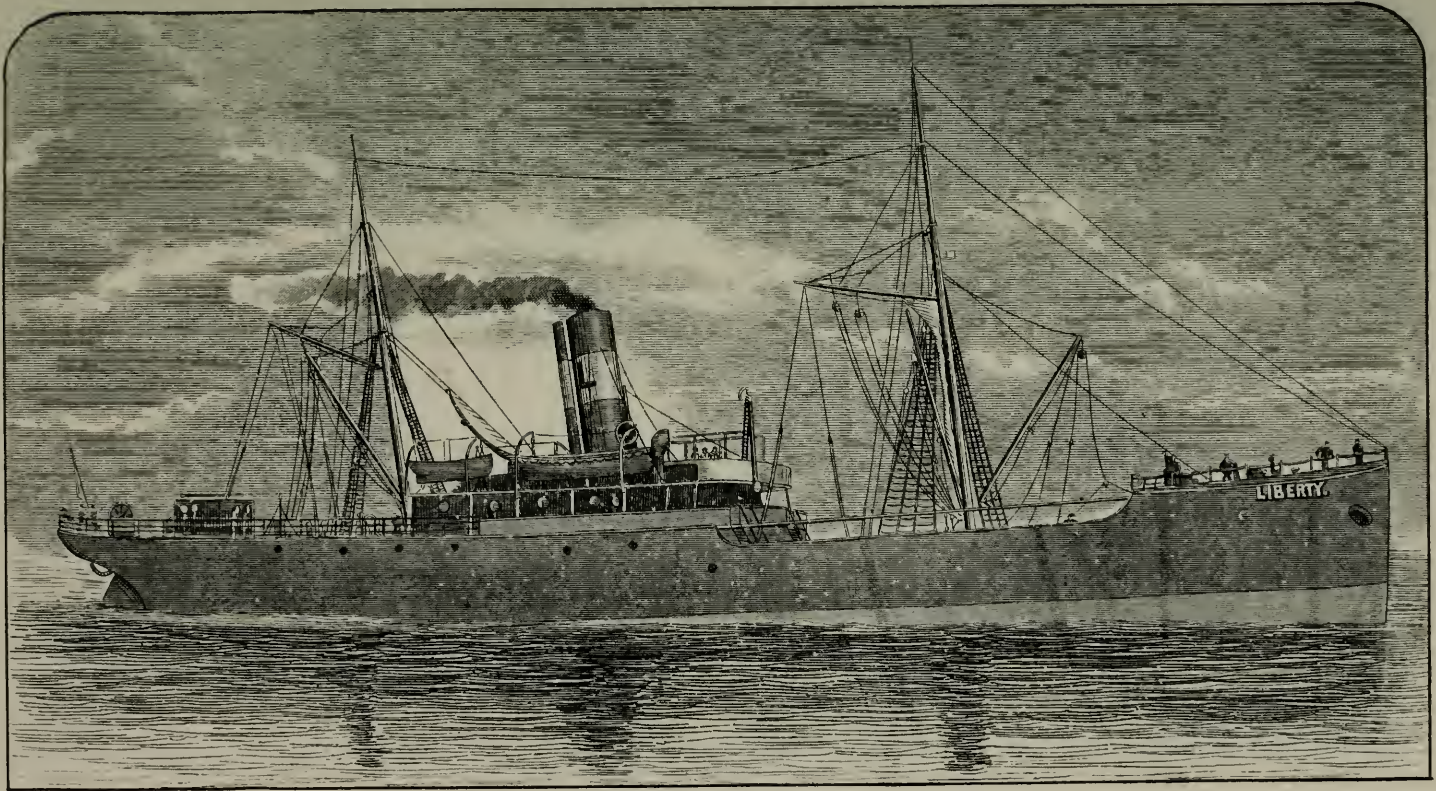
GARSTON OFFICES,
WEST SIDE, NEW DOCK, GARSTON, NEAR LIVERPOOL.



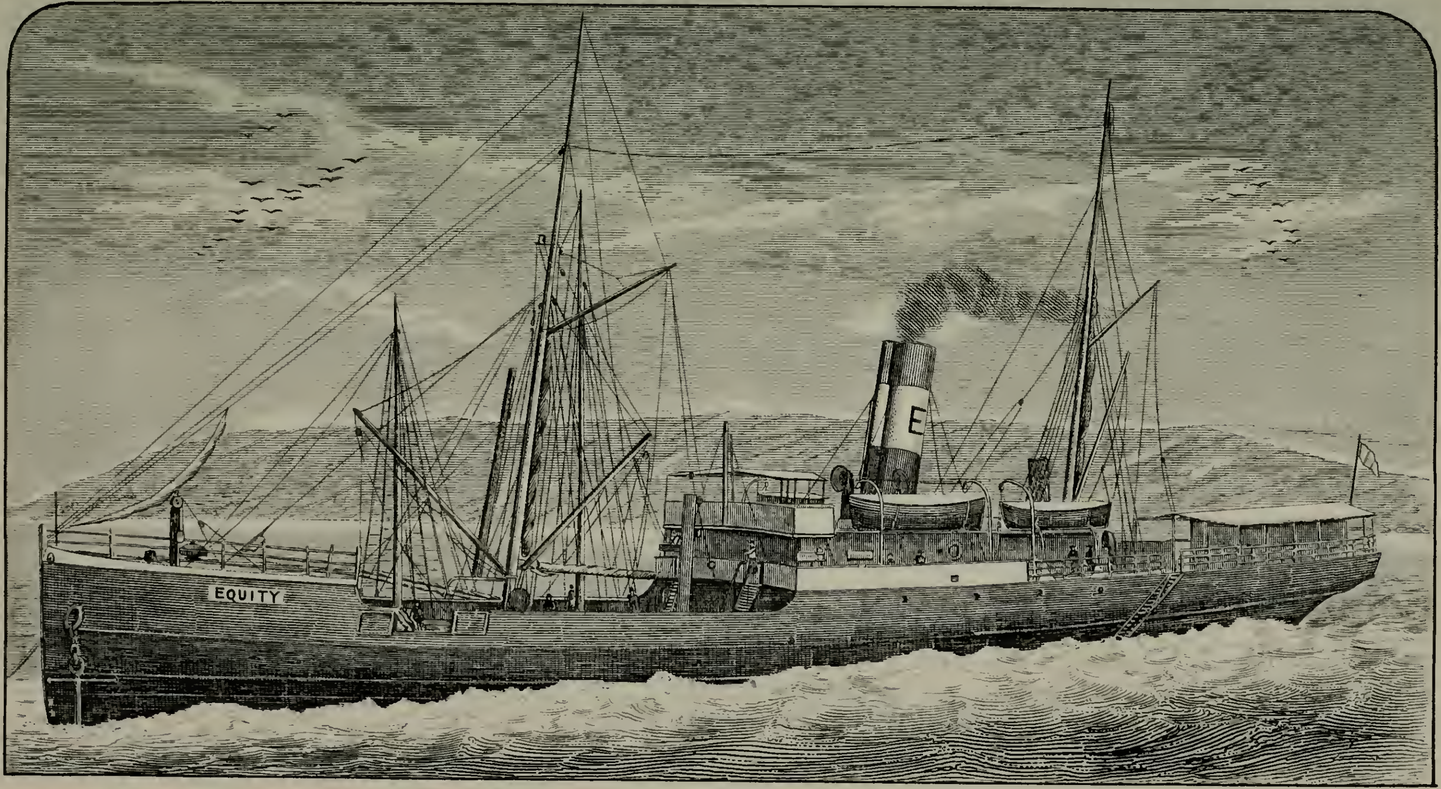
ROUEN OFFICES,
2, RUE JEANNE, D'ARC ROUEN, FRANCE.



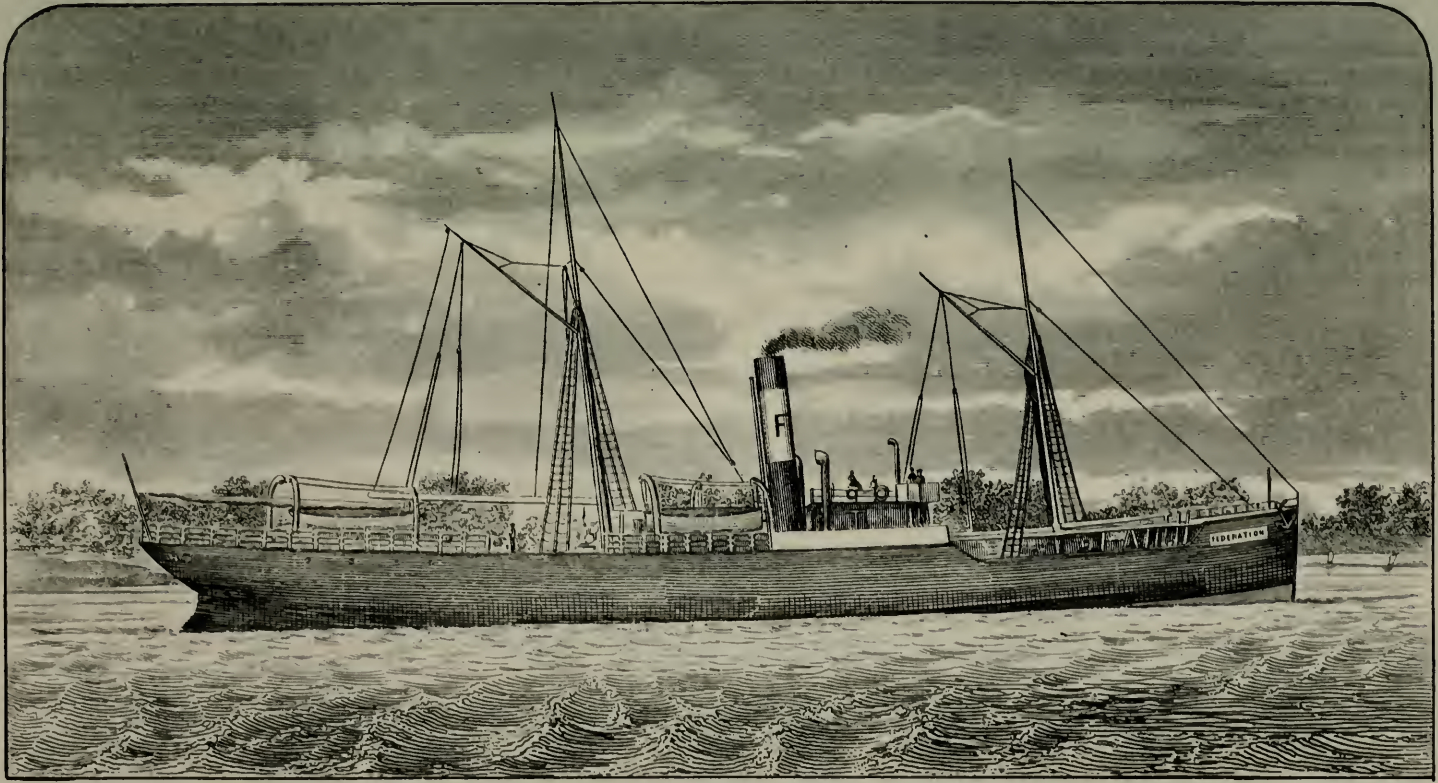
CALAIS OFFICES, RUE DE MADRID.



S.S. "LIBERTY." Goole-Hamburg Line.
(See page 49.)

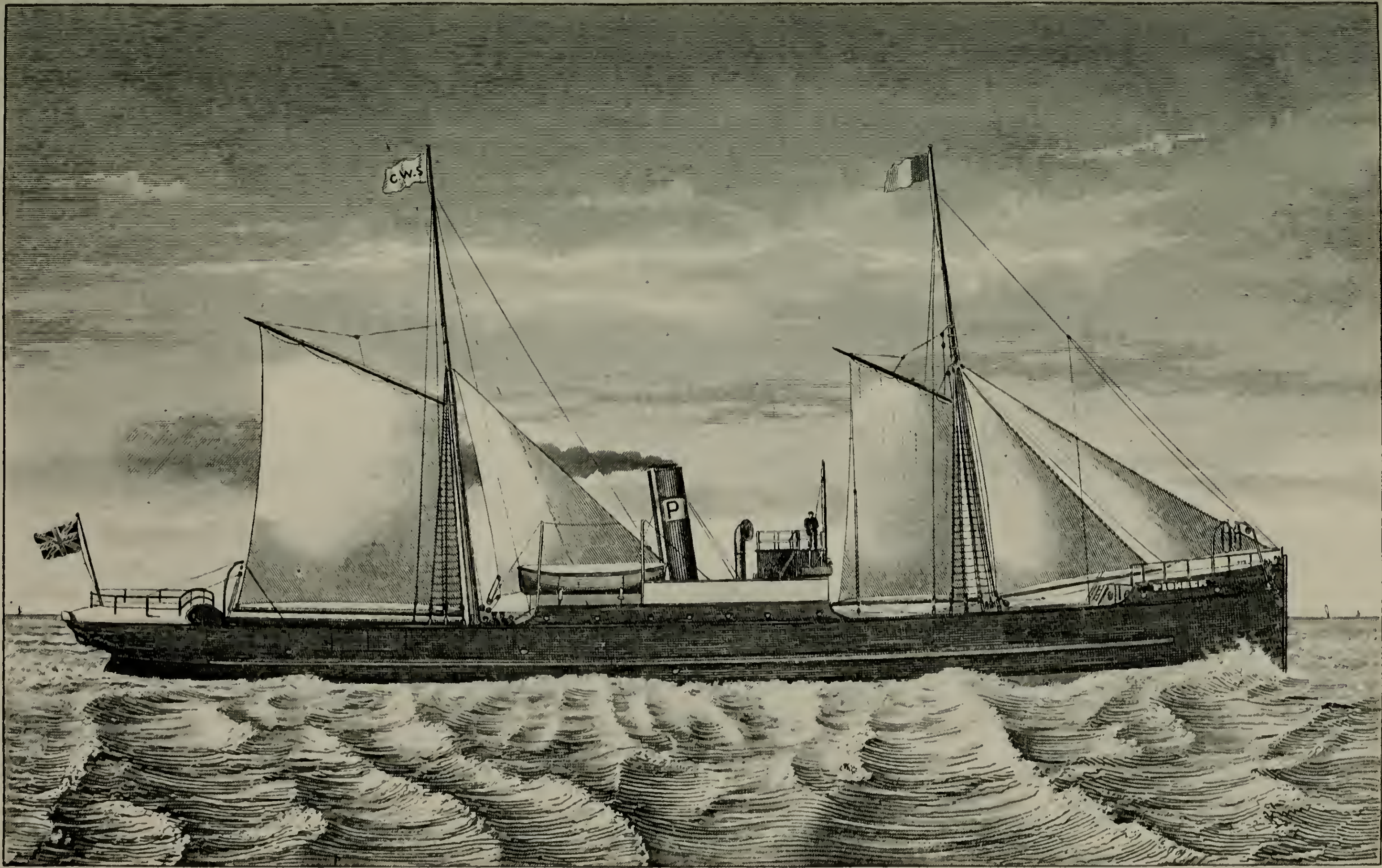


S.S. "EQUITY." GOOLE-HAMBURG LINE.
(See page 49.)

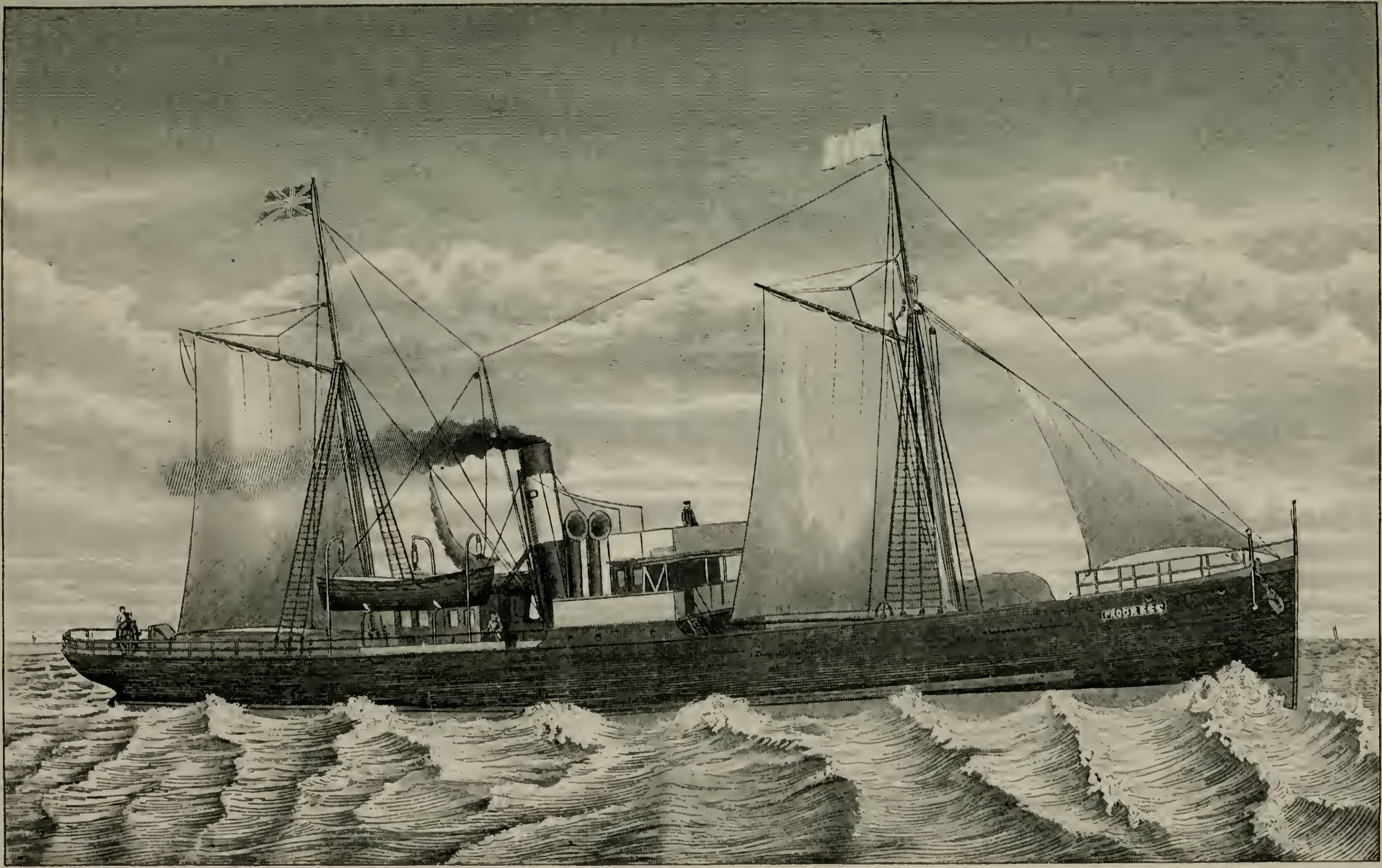


S.S. "FEDERATION." Goole-Hamburg Line

(See page 49.)



S.S. "PIONEER." MANCHESTER AND ROUEN LINE.
(See page 50.)



S.S. "PROGRESS." Goole-Calais Line.
(See page 48.)

THE

Co-operative Wholesale Society

LIMITED.

Enrolled August 11th, 1863, under the Provisions of the Industrial and Provident Societies Act, 25 and 26 Vict., cap. 87, sec. 15, 1862.

BUSINESS COMMENCED MARCH 14TH, 1864.

SHARES, £5 EACH, TRANSFERABLE.

Central Offices, Bank, Grocery and Provision, and Boot and Shoe Warehouses:

BALLOON STREET, MANCHESTER.

Drapery, Woollen Cloth, and Ready-Mades Warehouses:

DANTZIC STREET, MANCHESTER.

Furnishing Warehouse:

HOLGATE STREET, MANCHESTER.

Branches:

WATERLOO STREET, NEWCASTLE-ON-TYNE,

AND

LEMAN STREET, LONDON, E.

Purchasing and Forwarding Depots.

England:

LIVERPOOL, BRISTOL, LONGTON, GOOLE, AND GARSTON.

Ireland:

CORK, LIMERICK, TRALEE, AND ARMAGH.

Creameries:

ABINGTON.
CASTLEMAHON.
CUTTEEN.
DEVON ROAD.
DROMCLOUGH.
GLENMORE.
LIXNAW.

America: NEW YORK.
Canada: MONTREAL.
France: CALAIS AND ROUEN.
Denmark: COPENHAGEN, AARHUS.
Germany: HAMBURG.
Sweden: GOTHENBURG.

Depots and Salerooms:

LEEDS, HUDDERSFIELD, NOTTINGHAM, BLACKBURN, BIRMINGHAM, BRISTOL, NORTHAMPTON, AND CARDIFF.

Productive Works.

Biscuits and Sweets Works:
CRUMPSALL, NEAR MANCHESTER.

Boot and Shoe Works:
LEICESTER AND HECKMONDWIKE.

Soap Works:
IRLAM.

Woollen Cloth Works:
LIVINGSTONE MILL, BATLEY.

Ready-Mades Works:
HOLBECK, LEEDS.

Cocoa and Chocolate Works:
116, LEMAN STREET, LONDON.

Corn Mill:
DUNSTON-ON-TYNE.

Furniture Factory:
BROUGHTON, NEAR MANCHESTER.

Printing Works:
HOLGATE STREET, MANCHESTER.

Preserve Works:
MIDDLETON JUNCTION.

Shipowners and Shippers

BETWEEN

GARSTON AND ROUEN; GOOLE AND CALAIS; GOOLE AND HAMBURG: MANCHESTER AND ROUEN.

Steamships Owned by the Society:

"LIBERTY." "EQUITY." "FEDERATION." "PIONEER."
"PROGRESS." "DINAH." "BRITON."

Banking Agencies:

THE MANCHESTER AND COUNTY BANK LIMITED.
THE LONDON AND COUNTY BANK.
THE NATIONAL PROVINCIAL BANK OF ENGLAND.
THE MANCHESTER AND LIVERPOOL DISTRICT BANK.
THE LANCASHIRE AND YORKSHIRE BANK.
THE UNION BANK OF MANCHESTER.

General Committee.

Chairman:

Mr. JOHN SHILLITO,
17, Cavendish Terrace, Halifax.

Vice-Chairman:

Mr. THOMAS BLAND,
Rashcliffe, Huddersfield.

Secretary:

Mr. THOMAS SWANN, Beech Villa, James Street, Masborough.

Mr. WILLIAM BATES ....Green Lane, Patricroft.
Mr. JAMES FAIRCLOUGH ....33, Sackville Street, Barnsley.
Mr. E. GRINDROD ....8, Apsley Street, Keighley.
Mr. THOMAS HIND........................53, St. Peter's Road, Leicester.
Mr. R. HOLT ....84, Tweedale Street, Rochdale.
Mr. THOMAS KILLON ....45, Heywood Street, Bury.
Mr. WILLIAM LANDER ....155, Escrick Street, Halliwell, Bolton.
Mr. JOHN LORD ....19, Tremellen Street, Accrington.
Mr. T. E. MOORHOUSE.......................... *Reporter* Office, Delph.
Mr. ALFRED NORTH ....Mount Pleasant, Batley.
Mr. H. C. PINGSTONE............Yew Bank, Brook Road, Heaton Chapel.
Mr. A. SCOTTON.........................48, Co-operative Street, Derby.
Mr. JOHN STANSFIELD ....Devonshire Road, Blackpool.

Newcastle Branch Committee.

CHAIRMAN: Mr. T. TWEDDELL, Hutton Avenue, West Hartlepool.

VICE-CHAIRMAN: Mr. THOS. SHOTTON, 189, Coatsworth Road, Gateshead.

SECRETARY: Mr. ROBERT GIBSON, 120, Sidney Grove, Newcastle-on-Tyne.

Mr. GEORGE BINNEY ....2, Co-op. New Houses, Alligate, Durham.
Mr. W. D. GRAHAM................123, Bedsburn Road, Jarrow-on-Tyne.
Mr. ROBERT IRVING......................Woodrouffe Terrace, Carlisle.
Mr. THOMAS RULE......20, Ravensworth Terrace, Bensham, Gateshead.
Mr. WILLIAM STOKER ....Seaton Delaval, Newcastle-on-Tyne.

London Branch Committee.

CHAIRMAN: Mr. GEO. HAWKINS, 53, Kingston Road, Oxford.

VICE-CHAIRMAN: Mr. GEO. SUTHERLAND, 78, Maxey Road, Plumstead.

SECRETARY: Mr. HENRY PUMPHREY, Paddock Terrace, Lewes.

Mr. JOSEPH CLAY ....Stratton Road, Gloucester.
Mr. H. ELSEY............9, Lynwood Terrace, Lawrence Road, Southsea.
Mr. J. F. GOODEY ....New Town Lodge, Colchester.
Mr. GEORGE HINES ....North Bank, Belstead Road, Ipswich.
Mr. T. E. WEBB..Kootenay, Durham Road, Cottenham Park, Wimbledon.

Scrutineers:

Mr. F. HARDERN, Oldham.
Mr. J. J. BARSTOW, Dewsbury.

Auditors:

Mr. THOS. J. BAYLIS, Masborough.
Mr. THOMAS WOOD, Manchester.
Mr. JAMES E. LORD, Rochdale.
Mr. ISAAC HAIGH, Barnsley.

Officers of the Society.

Accountant:

Mr. THOMAS BRODRICK, Eccles.

Cashier:

Mr. A. GREENWOOD, Rochdale.

Buyers, Salesmen, &c.

Manchester—Grocery and Provisions:

Mr. ISAAC TWEEDALE.
Mr. THOMAS PEARSON.
Mr. GEORGE GARLICK.
Mr. WILLIAM WROOT.

Manchester—Drapery:

Mr. JAMES FLETCHER.
Mr. WILLIAM T. ALLITT.
Mr. JOHN SHARROCKS.
Mr. JOHN T. OGDEN.

Manchester—Woollens, Boots, and Furniture:

Woollens and Ready-mades	Mr. W. GIBSON.
Boots and Shoes	Mr. HENRY JACKSON.
Furniture	Mr. T. R. ALLEN.

Manchester—Travellers:

Tea, Coffee, and Cocoa	Mr. R. TURNER.
Grocery and Provisions	Mr. GEORGE BARLASS.
Productive Societies and Drapery	Mr. J. MEADOWCROFT.
" " "	Mr. THOS. A. RANKIN.
" " "	Mr. A. ACKROYD.

Shipping Department:

General Manager	Mr. CHAS. R. CAMERON.

Shipping and Forwarding Depots:

Rouen (France)	Mr. JAMES MARQUIS.
Goole	Mr. W. J. SCHOFIELD.
Calais	Mr. WILLIAM HURT.

London:

Tea, Coffee, and Cocoa	Mr. CHARLES FIELDING.

Liverpool:

Grocery and Provisions	Mr. ARTHUR W. LOBB.

Salerooms:

Leeds	Mr. JOSEPH HOLDEN.
Nottingham	Mr. A. DELVES.
Huddersfield	Mr. W. HARRISON.
Birmingham	Mr. W. AMOS.
Northampton	Mr. A. BAKER.
Cardiff	Mr. JAS. F. JAMES.

Longton:

Crockery Depôt	Mr. J. RHODES.

Newcastle:

Grocery and Provisions	Mr. ROBT. WILKINSON.
" "	Mr. T. WEATHERSON.
Drapery	Mr. JOHN MACKENZIE.
Boots and Shoes	Mr. O. JACKSON.
Furniture and Hardware	Mr. J. W. TAYLOR.
Chief Clerk	Mr. H. R. BAILEY.

Buyers, Salesmen, &c.

London:

Grocery and Provisions	Mr. BENJAMIN JONES.
" " "	Mr. WM. OPENSHAW.
Drapery	Mr. F. G. WADDINGTON.
Boots and Shoes	Mr. ALFRED PARTRIDGE.
Furnishing	Mr. F. E. ODDY.
Chief Clerk	Mr. WILLIAM STRAWN.

Bristol Depot:

Mr. C. CUNNINGHAM.

Irish Branches—Butter and Eggs.

Cork:

Mr. JAMES TURNBULL.

Limerick:

Mr. WILLIAM L. STOKES.

Tralee:

Mr. JAMES DAWSON.

Armagh:

Mr. J. HOLLAND.

New York (America):

Mr. JOHN GLEDHILL.

Montreal (Canada):

Mr. A. C. WIELAND.

Copenhagen (Denmark):

Mr. JOHN ANDREW.

Hamburg (Germany):

Mr. WM. DILWORTH.

Aarhus (Denmark):

Mr. H. J. W. MADSEN.

Gothenburg (Sweden):

Mr. H. C. K. PETERSEN.

Lower Crumpsall Biscuit, &c., Works:

Mr. THOMAS HAYES.

Leicester Boot and Shoe Works:

Mr. JOHN BUTCHER.

Heckmondwike Boot and Shoe Works:

Mr. J. W. HEMMINGS.

Irlam Soap Works:

Mr. J. E. GREEN.

Travellers .... Mr. J. POGSON AND Mr. J. ANDERSON.

Batley Woollen Cloth Works:

Mr. S. BOOTHROYD.

Leeds Ready-Mades Works:

Mr. WILLIAM UTTLEY.

Dunston Corn Mill:

Mr. TOM PARKINSON.

Broughton (Manchester) Cabinet Factory:

Mr. J. HODGKINSON.

Printing Department:

Mr. G. BREARLEY.

Building Department:

Mr. P. HEYHURST.

West Hartlepool Lard Factory:

Mr. W. HOLLAND.

Middleton Junction Preserve Works:

Mr. A. J. CLEMENTS.

Architect:

Mr. F. E. L. HARRIS.

Employés.

NUMBER OF EMPLOYÉS, SEPTEMBER, 1896.

			Collective Totals.
DISTRIBUTIVE DEPARTMENTS.			
General Drapery, Boot and Shoe, and Furnishing Offices	Manchester	294	
Cashier's Office	,,	20	
Grocery Department	,,	178	
Drapery ,,	,,	106	
Woollen Cloth Department	,,	25	
Boot and Shoe ,,	,,	38	
Furnishing ,,	,,	59	
Shipping ,,	,,	7	
Building ,,	,,	323	
Dining-room ,,	,,	10	
Other ,,	,,	27	
			1,087
BRANCHES.			
Newcastle		431	
,, Building Department		81	
			512
London		292	
,, Tea Department		378	
,, Stables		20	
,, Brush and Bedding Productive		35	
,, Building Department		199	
			924
DEPÔT.			
Bristol			52
SALEROOMS.			
Leeds		5	
Nottingham		2	
Birmingham		1	
Northampton		1	
Cardiff		6	
			15
PURCHASING DEPÔTS.			
Liverpool Branch—Grocery and Shipping		22	
Longton Crockery		24	
Irish Branches		53	
,, Creameries		38	
			137
FOREIGN PURCHASING DEPÔTS.			
New York		6	
Montreal		2	
Copenhagen		10	
Hamburg		4	
Aarhus		6	
Gothenburg		6	
Denia		2	
			36
Carried forward			2,763

NUMBER OF EMPLOYÉS, SEPTEMBER, 1896.

		Collective Totals.
Brought forward		2,763
SHIPPING OFFICES.		
Goole	15	
Garston	2	
Rouen	5	
Calais	8	
		30
STEAMSHIPS.		
"Pioneer"	14	
"Progress"	13	
"Federation"	18	
"Equity"	19	
"Liberty"	19	
"Briton"	4	
"Dinah"	4	
		91
PRODUCTIVE WORKS.		
Crumpsall Biscuit Works	233	
Middleton Junction Preserve Works	140	
Leicester Shoe Works, Knighton Fields	1,688	
,, ,, Duns Lane	283	
Enderby	82	
Heckmondwike Shoe Works	314	
,, Currying Department	50	
Irlam Soap Works	139	
Batley Woollen Mill	102	
Leeds Ready-Mades	370	
Dunston Corn Mill	165	
West Hartlepool Lard Refinery	21	
Broughton Cabinet Factory	105	
,, Tailoring ,,	310	
,, Shirt ,,	90	
,, Mantle ,,	20	
,, Underclothing Factory	50	
Manchester Printing Department	102	
		4,264
Total		7,148

Terms of Membership.

TRADE DEPARTMENT.

FOR the information of Societies and Companies not already purchasers from or members of this Society, we give below—(1) our requirements on opening new accounts; (2) particulars of trade terms; (3) terms and conditions of membership; and (4) a few of the advantages accruing from membership.

Any further information will gladly be given on application.

(1) New Accounts.

Societies desiring to open accounts are requested to furnish us with a copy each of their registered rules and latest balance sheet.

If a balance sheet has not been prepared, then the following information should be sent, viz., the number of members; amount of paid-up share capital; whether credit is allowed, and if so, to what extent; the amount of business done, or expected to be done, per week.

(2) Trade Terms.

With the first order sufficient cash must be remitted to cover the estimated value of the goods ordered; afterwards payment must be made within seven days from date of invoice; all accounts are rendered strictly net.

Business is conducted on these terms with *registered* Co-operative Societies and Companies only.

Societies in process of formation and whose rules are not yet registered can be supplied with goods on payment of cash with each order.

(3) Terms and Conditions of Membership.

The following extracts from our Rules contain the principal features in connection with membership:—

(a) ADMISSION OF MEMBERS.—(Extract from Rule 5.)

The members of this society shall consist of such co-operative societies or companies (registered under the Industrial and Provident Societies Act, 1876, or under the Companies Acts, with limited liability, or under any law of the country where they are situate, whereby they acquire the right of trading as bodies corporate, with limited liability) as have been admitted by the general committee, and approved by a majority of delegates voting at a general meeting of the society. An application for shares shall be made by a resolution of some general or committee meeting of the society or company making the application, contained in writing and attested by the signatures of the secretary and three of its members. Every society or company making an application for shares shall state the number of its members, and take up not less than three £5 shares for every twenty members, or fractional part thereof, and agree to increase the number annually as its members increase, making the return of such increase at the time and in accordance with its return to the Registrar.

(b) CAPITAL—HOW PAID UP.—(Extract from Rule 9.)

The capital of this society shall be raised in shares of five pounds each, which shall be transferable only. Every society, on its admission, shall pay the sum of not less than one shilling on each share taken up. Each five pounds so paid shall constitute one fully paid-up share; but no dividend or interest shall be withdrawn by members until their shares are paid up. Any member may pay up shares in advance. After having received the consent of a special meeting, the whole or any part of the share capital may be called up by the general committee on giving notice to that effect.

(c) FORM OF APPLICATION FOR SHARES.

APPLICATION FOR SHARES.

Folio..........

The..

Co-operative Society Limited.

TO THE DIRECTORS OF THE CO-OPERATIVE WHOLESALE SOCIETY LIMITED, 1, BALLOON STREET, MANCHESTER.

Gentlemen,

Whereas, by a Resolution of the................ *Co-operative Society Limited, passed by the**.............. *at a Meeting held on the*........*day of*...........*it was resolved that the Society, which consists of*........*Members, agree to take up*........*Shares (being not less than Three Shares for every Twenty of our Members, or fractional part thereof) in the* Co-operative Wholesale Society Limited, *and annually to increase our Shares at the time and in accordance with our return to the Registrar, and to accept such Shares on the terms and conditions specified in your Rules.*

........................*189*

Attested by ....
.... *Three Members.*
....

.................................*Secretary.*

*Members, Committee of Management, or Directors.

(4) ADVANTAGES ACCRUING FROM MEMBERSHIP.

(a) The liability of each society member is limited to the amount of its shares.

(b) Members of this Society receive double the rate of dividend on purchases to non-members.

(c) Share capital receives interest after the rate of £5 per cent per annum.

(d) Each society composing the "Wholesale" may nominate one representative for every 500 of its members to represent it at the General or Branch Quarterly Meetings, or other Special Meetings which may be convened from time to time, and thus have a direct influence and voice in the control and management of its affairs. The nomination and election of its officers for General and Branch Committees, Auditors, and Scrutineers are effected by means of nomination and voting papers, which are sent to all shareholding societies to be filled up.

(e) A merely nominal payment secures membership, a deposit of 1s. per share upon application being only required; the dividend on purchases and interest on share capital being credited to share account until paid up.

Those societies not already federated with the "Wholesale" should at once join and thus secure the advantages to themselves and the co-operative movement generally which its extensive and varied operations are intended to confer.

Business Notices.

All Letters to be addressed to the Society, and not to Individuals.

WE would especially impress upon Societies' Managers and Secretaries the necessity of complying with the following regulations, in order to facilitate the despatch of Goods, to ensure promptitude in the answering and classification of letters, and to prevent disappointment.

LETTERS.

All letters must be addressed to the Society, and not to individuals.

Addressed Envelopes are supplied at cost price.

Communications for the following Departments, and relating to the subjects named, should always be made on separate forms or sheets of paper, viz.:—

(1) Bank and Cashier's Department.
(2) Accountant's Department.
(3) Replies to Correspondence.
(4) Grocery and Provision Department—Orders only.
(5) ,, ,, ,, Applications for Samples and Prices.
(6) Drapery Department—Orders and Samples.
(7) Woollen Cloth and Ready-made Department—Orders and Samples.
(8) Boot and Shoe Department—Orders and Samples.
(9) Furnishing Department— ,, ,,
(10) Coal—Orders and Applications for Prices.
(11) Advices of Returns.
(12) Claims, delays, complaints, &c., for all Departments.
(13) Printing Department—Orders and Applications for Prices.

Although each of the above classifications requires a separate form, they should all be enclosed under one cover, and addressed to the Society.

At the Central Office, in Manchester alone, the number of Letters, Orders, &c., received daily is enormous. To effectually deal with these communications some division into departments is absolutely necessary.

These classifications have therefore been adopted, and Societies are asked to assist by seeing that their communications are despatched in accordance therewith, as when subjects included in more than one of these divisions are dealt with on one form, much labour is involved in re-writing the portions required to be separated.

ORDERS FOR GOODS.

The name of the Society and the Station to which the Goods are to be forwarded should be written at the head of each order.

Orders should contain the Price or Brand of each Article wanted.

Delays would often be prevented by noticing in which column in the Price Lists (Manchester, Newcastle, London, &c.) the Goods are quoted, and posting the Orders direct to the Central, or branches named, as the case requires.

As regards "Direct Quotations," notwithstanding that there are many instances where minimum quantities are fixed, orders are frequently received for less than the stipulated quantities. This necessitates correspondence, and in cases of urgency entails inconvenience to Societies, which would be obviated by carefully noticing the Price List when ordering.

It is desirable that the Forms we have specially prepared should be used in sending Orders.

1. Grocery, Drapery, Woollens, and Furnishing Department.
2. Tailoring (Bespoke), with instructions for measurement.
3. Boot and Shoe Department.
4. ,, ,, ,, (Bespoke), with instructions for measurement.

Books containing 50 Forms, with Duplicates, will be sent free on application.

Orders for each Department should be made out on separate forms.

CONSIGNMENT OF GOODS.

Whenever delays occur in the delivery of Goods, Societies will please communicate with the carrier at their end, in addition to informing us.

To prevent any misunderstanding as to who is responsible for the safe delivery of Goods, we would state that when Goods are Carriage Paid we undertake their safe delivery; but when the Carriage is Not Paid, the Carrier is responsible to the Consignees, who, before taking delivery of any Goods, should carefully examine the same, and at once claim for any loss or damage sustained in transit.

EMPTIES.

Empty packages should be returned carefully packed, and fully and correctly consigned.

Each package should have a *label or direction card attached, stating the contents, the name of the Society forwarding them, and the name and address of their destination.*

Empties should be returned direct to the manufacturer from whom the Goods were sent. When returned to Manchester or the Branches, additional expense and trouble are incurred in re-consigning them to their proper destination.

A few manufacturers pay carriage on returned empties; where this is done Societies will consign carriage forward, in all other cases carriage should be paid. A list of firms who pay carriage may be obtained on application at the Central Offices.

In all cases an advice giving full particulars of the empties returned (viz., the kind, the quantity, the numbers, the price charged, and reference to invoice where charged) should be immediately posted to us, as unless this is done our rule is not to allow credit for them.

We have a book, which we send free on application, containing 50 forms, with duplicates, specially prepared for this purpose, which Societies are recommended to use.

The importance of carrying out these instructions will be seen when Societies are informed that the Railway Companies seldom make deliveries of empties until they have a complete load, and under such circumstances it is almost impossible to ascertain from what Societies they have been received, unless full particulars are given.

In many cases Societies do not fully carry out these instructions, consequently we are continually receiving empty packages which we are not able to credit because we do not know from whom they have been returned. This is a loss which we are desirous Societies should not incur; we therefore point it out to them so that the necessary precautions may be taken to avoid it.

GOODS CONSIGNED AS EMPTIES.

We cannot hold ourselves responsible for any Goods that may be returned consigned as empties, as any claim made on the Railway Companies for missing Goods under such circumstances would not be entertained.

STATEMENTS OF TRADE ACCOUNTS.

Weekly Statements

Are sent out to all Societies doing business with us, showing Total of Goods Invoiced, Cash Received, and Allowances made during the week, and Balance, if any, at the week end.

These statements afford a great check on Societies' books, and Secretaries are requested to compare each one as received with their books, and to report to us particulars in case of any discrepancy.

Quarterly Statements

Are issued immediately after our Books are made up for the Quarter.

They are in form similar to the Weekly Statements, and must be returned, duly certified if correct, to our Auditors, who require them as an independent check as to the correctness of our accounts.

We rely upon Societies giving prompt attention to these statements, as the early issue of our Balance Sheets depends to an extent on their immediate return.

In case of any discrepancy, details should be at once given or applied for, but if correct, the Statement should be forthwith signed and returned to the Auditors, in the envelope sent out for that purpose.

SHARE AND LOAN PASS BOOKS.

These should be sent to the Head Office (1, Balloon Street, Manchester) *every* Quarter, viz., in the Second Week of March, June, September, and December, for the purpose of having the previous Quarter's Interest and Dividend entered therein. Societies requiring information respecting the amount of their Share or Loan Capital are requested to send their Pass Books for the amount to be filled in, instead of sending for Statements.

When Shares are paid up the Share Book need not again be sent until a further allotment is made.

SOCIETIES' BALANCE SHEETS.

We especially desire those Societies who have not already done so to send us a copy of their last Balance Sheet, stating on it the number of their Members; also, a copy of their rules.

Trade Department.

CASH ARRANGEMENTS.

WE beg to call the attention of Societies to the arrangements specified below, which will give facility and security when making remittances to this Society :—

1. **All cash must be addressed to the Society only,** and not to individuals, *nor to the committee or auditors.*

2. **CHEQUES and DRAFTS** to be made payable to the CO-OPERATIVE WHOLESALE SOCIETY LIMITED Post-office Orders to Abraham Greenwood. Drafts drawn in favour of the Society must be payable on demand; other drafts when remitted to us must have reached maturity. All drafts, if possible, should be made payable either in London or Manchester.

3. Societies are respectfully requested, when drawing cheques in our favour, to do so in full, viz., Co-operative Wholesale Society Limited, without any abbreviation or variation whatever.

4. In forwarding half notes Societies should state whether they are first or second halves; the latter half notes should be forwarded immediately on receipt of our acknowledgment of the first. Societies not receiving acknowledgment for first or second half notes in due course of post will oblige by calling attention to the omission.

5. Remittances made through a bank should be advised to the Wholesale at Manchester without delay. Cash Advice Books are supplied free on application.

6. Loans, Withdrawal of.—Societies, when requiring to withdraw their loans, are respectfully requested to **apply at the Head Office, Manchester,** for an official form, which is provided for and supplied to Societies for the purpose of enabling them to withdraw loans and to state definitely the amount of loan they wish to withdraw. Societies will please note this special request. **The Wholesale Society will give due notice when they are prepared to accept new loans.**

Banking Department.

CURRENT ACCOUNTS

OPENED ON THE PLAN USUALLY ADOPTED BY OTHER BANKERS.

CUSTOMERS keeping accounts with the Bank may have moneys paid to their credit at the

HEAD OFFICES,
BALLOON STREET, MANCHESTER,
AT
THE BRANCHES,
WATERLOO STREET, NEWCASTLE-ON-TYNE,
AND
99, LEMAN STREET, WHITECHAPEL, LONDON, E.;
ALSO AT
THE INDUSTRIAL SOCIETY, SCHOOL STREET, OVER DARWEN;
THE CO-OPERATIVE SOCIETY, HIGH STREET, LEICESTER;
AT THE
HEAD OFFICE,
OR ANY BRANCH OF THE FOLLOWING BANKS:
MANCHESTER AND COUNTY BANK,
LONDON AND COUNTY BANK,
NATIONAL PROVINCIAL BANK OF ENGLAND,
UNION BANK OF MANCHESTER,
LANCASHIRE AND YORKSHIRE BANK,
MANCHESTER AND LIVERPOOL DISTRICT BANK,
WILLIAMS DEACON AND MANCHESTER AND SALFORD BANK,
AND THE
UNION BANK OF SCOTLAND LIMITED.

The Banking Turnover is upwards of £30,000,000 per annum.

Grocery and Provision Departments.

A COMPLETE PRICE LIST of the goods dealt in is issued weekly, the prices being fixed for the day of issue only. These Weekly Lists, which are sent to Co-operative Societies with whom we do business, contain reports and opinions as to the state of the markets as regards some of the principal articles.

The reports are intended for, and calculated to be of service to, Committees and Managers of Societies, in pointing out the tendency of the markets, and when to buy to advantage.

The following is a brief *résumé* of the chief commodities, and how the "Wholesale" is circumstanced in relation thereto:—

BUTTER AND EGGS—IRISH.

The arrangements in force for conducting this portion of the business are remarkably well adapted for supplying the same on the most favourable terms.

There are buyers attending markets at Cork, Limerick, Tralee, and Armagh. These buyers are gentlemen of the first experience in the trade, and are under the immediate and direct control of the Society—not being merely employed as agents or buyers on commission.

The buyers, although taking up their residences at the places named, attend all the best and noted markets within a radius of twenty or thirty miles, and thus it will be seen that the area covered by their operations embraces a great proportion of the south of Ireland, and some of the most fertile districts of that country.

This Society is by far the most extensive purchaser and producer of Irish Creamery Butter.

BUTTER AND EGGS—DENMARK AND SWEDEN.

The same remarks may be made in this respect as in the case of Irish Butter and Eggs. We have our own buyers stationed at Copenhagen, Aarhus, and Gothenburg. They purchase direct from farmers who are considered the best producers in both Denmark and Sweden, and contract with them for a weekly supply of all they make.

Before shipment, all goods are carefully examined by our representative.

Societies should encourage this Branch by giving us weekly orders for shipment direct, and thus save the cost of warehousing and of carriage from Manchester.

BUTTER—KIEL, AND GERMAN EGGS.

Our arrangements for the purchase of these are similar to those at Copenhagen.

Our own buyer is located at Hamburg, and buys first-hand from the farmers and producers.

Our ready-money system of doing business commands the best terms, and enables us to do a very extensive and satisfactory trade in these articles.

BUTTER AND EGGS—FRENCH.

Supplies of these are obtained fresh weekly, and are carefully selected for the Society, by competant and experienced men, from the best dairies and districts in France.

AMERICAN AND CANADIAN BUTTER, CHEESE, BACON, HAMS, LARD, FLOUR, APPLES, &c., &c.

NEW YORK AND MONTREAL BRANCHES.

Buyers are located at New York and Montreal, whose duty it is to purchase and export the articles sold by the Society which are grown and manufactured in the United States and Canada.

The business done by the Society, and the Capital always at its command, enables its representatives to enter the markets in an independent manner, and places them in a pre-eminent position to exact terms of the first order. These conditions, and the consequent absence of the intermediate dealers, qualify the Society to transfer the goods from where they are produced to the consumer with the least possible addition to the cost.

CHESHIRE CHEESE.

The Society's buyers visit the best dairies and farms in Cheshire where this is made, and purchase it from the farmers on the spot.

YEAST.

This is imported by the Society direct from the best distillers at Schiedam, Hamburg, and France. It is received in the port of Hull twice in each week—*i.e.*, Mondays and Thursdays—and distributed from there to the Society's customers.

SUGAR.

The large purchases which the Society is able to make place it in the best position for securing the utmost advantages from the refiners.

In addition to this, the Society's own buyers are in the centre of operations in Liverpool, London, Greenock, and New York, and are able to obtain information at first hand.

There is a telephone connecting its Liverpool offices with the Central establishment at Manchester, and the buyer in Liverpool is thus in constant telephonic communication with the Central buyer at Manchester, who, being in receipt of the latest and most reliable reports, is enabled to decide which is the most favourable time for making purchases.

Demeraras and other Raws are sampled on arrival, and the most suitable lots selected. Continental Cubes, Loaves, and Granulated are bought in many cases direct from the Refiners and shipped to the most convenient ports.

FLOUR, GRAIN, &c.

The finest brands of Flours are bought direct from the millers in Hungary; our own Registered Brands of Flours are distributed direct from the mill.

The Society's buyers in New York and Montreal make very extensive purchases of Flour, direct from the millers, in the United States and Canada.

Grain is bought in large quantities, "to arrive," and Meal of all kinds from the mills direct.

DRIED FRUIT.

Our Dried Fruit buyers go annually to Greece, Turkey, and Spain at the season when the fruits are being gathered, and visit the vineyards where the fruits are drying, in order to select the Samples of Currants, Sultanas, Figs, Valencias, and Muscatels most suitable for Co-operative Societies. These are bought direct from the producer, thereby saving the middlemen's profits, and we get a better selection than could otherwise be obtained.

PEPPER AND GINGER.

We are large dealers in these articles, and the qualities we supply may be relied upon. We have an extensive and up-to-date grinding plant laid down, and these commodities are ground under our own immediate supervision. Their purity is thus guaranteed.

POTATOES, ONIONS, APPLES, &c.

There is a special buyer for these goods, who travels over the districts known to produce the best sorts, and they are bought direct from the farmers when it can be done with advantage. Our buyer also regularly attends the Liverpool and Manchester Green Fruit Auctions.

Purchases to a very large extent are also made in France, Belgium, and Germany, and the goods are imported to Goole and Garston, by the Society's own steamers, which ply regularly between Calais and Goole and Hamburg and Goole on the East, and Rouen and Garston and Rouen and Manchester on the West Coast.

For the Productions of our own Works at Crumpsall, Irlam, Middleton, West Hartlepool, and Dunston, see separate Advertisements.

CANNED GOODS.

In regard to this trade we are in a position second to none; our arrangements being such that we have first offers from all the principal packers in America. Salmon, Lobster, Beef, Luncheon Tongues, Rabbits, and Canned Fruits and Tomatoes we have specially packed for us under our own brands.

Tea, Coffee, & Cocoa Department,

LEMAN STREET, LONDON, E.

WE have a buyer on the London Market whose exclusive duty it is to select and purchase Teas, Coffees, and Cocoas direct from the Importers.

The excellence of this arrangement, whether viewed from an economical point, or from that of enabling us to efficiently supply Societies with all the numerous varieties and qualities they may desire, is too apparent to need illustration.

Our unlimited command of money and unequalled organisation places us in a position for doing this trade superior to that of any other house.

ASSAM AND OTHER INDIAN TEAS.

These are made a special study. Year by year they are increasing in favour with the public; and their greater pungency and strength, as compared with China Teas, are likely to make them still further popular.

CEYLON TEAS.

The enterprise of the planters in the Island of Ceylon, which started some few years ago, has proved entirely satisfactory, and the various estates are now yielding a much larger quantity with beneficial results to both growers and consumers.

These Teas are rapidly increasing in favour, and the consumption of 1896 shows an increase of 6,000,000lbs. over 1895.

CHINA TEAS.

The crop this season, on the whole, consists of good useful liquoring Teas, but we have again to report a steady decrease in the consumption.

RED LEAF CONGOUS.

Seumoos are very good this year; other kinds are about the average.

BLACK LEAF CONGOUS.

These are mostly medium quality, with strong, useful liquor, especially Kintucks and Ningchows.

SCENTED TEAS.

This season's crop is not quite so well made, but are better in the cup than last season.

GREEN TEAS.

The home consumption of these kinds is decreasing at a rapid rate, and they are now only used in a few districts.

BLENDED TEAS.

The art of blending is now carried to a high pitch of perfection, and to work it successfully requires not only a knowledge of the true affinities of the various growths of India, China, and Ceylon, acquired by a long apprenticeship to tea tasting, but ample capital, large premises, suitable machinery, and a competent staff of well-instructed employés. These have been provided for this section of our Tea and Coffee business.

Extreme care is taken to suit all tastes and districts, and everything that can be thought of to make our arrangements, if possible, still more perfect, will be done.

BULK MIXED.

These are packed in cads, half chests, and chests. The saving of capital and labour, the greater efficiency and satisfaction resulting from scientific blending, and the numerous grades supplied by us, is causing a largely-increased demand, and is making them very popular.

We are now supplying

Indian, Ceylon, and China Blends.
Ceylons and Indians, with a preponderance of Ceylons.
Pure Indians.
Pure Ceylons.
Indians and Ceylons, with a preponderance of Indians.

CHINA PACKET TEAS.

In addition to the excellence of the blending, we are making extra efforts to turn our packets out of a design and appearance that shall command attention and attract the consumer.

Everyone will admit the superiority in appearance of a handsome packet to the ordinary parcel turned out by the shopman when the Tea is weighed over the counter.

By careful attention to the economy of labour, we are able to supply packets, in large and beautiful variety, at a cost less even than would be incurred if made up in the ordinary way in the Store. We pack eight varieties, at prices ranging from 1s. 4d. to 3s. 6d. In order to meet the requirements of those who prefer the delicate flavoured China Teas, or who cannot drink the strong pungent Indian and Ceylon Teas, we supply a pure China Tea in packets.

INDIAN PACKET TEAS.

As we have mentioned before, Indian Teas are rapidly increasing in public favour, and, instead of being mixed with China Teas, are now being extensively used by themselves, so to meet these requirements we have introduced two Indian Packets, one a pure Souchong and the other a pure Pekoe blend.

We have added to our extensive list of Packet Teas a "Darjeeling" Packet. This is a tract of country situated high up on the Himalayas, and has been always noted for the peculiarly fine flavour of its Teas, but has only during the last season or two grown enough to warrant us making a standard blend.

CEYLON PACKET TEAS.

These Teas are rapidly and deservedly growing in public favour, on account of their strong, rich, and delicious flavour, and we now supply three Packet Teas. We warn our readers that a great many mixtures are offered as Pure Ceylon Teas in leaden packets, and represented as being imported direct from Ceylon in this form. Teas offered in such packets should be avoided, as the finest Ceylon Teas are seldom so imported.

COFFEES.

Plantation shipments total rather larger than last year, and the quality is up to the average, whilst prices compared to previous season have been on a more moderate scale.

East India arrivals have been rather less than usual, but, quality not being desirable, this kind has been rather neglected.

Costa Rica.—The finer sorts are rather short in supply. Prices have been rather irregular during the earlier part of the season, but later a substantial advance has taken place.

Rio and Santos.—These shipments have been on a more extensive scale than last season, prices in consequence being somewhat lower. Should the next crop be an abundant one also, we may expect further reduction in prices.

RAW COFFEES.

Our arrangements for the supply of all kinds in use in the home market are as efficient as they can be possibly made.

Samples, both in the raw and roasted state, are sent with all quotations.

ROASTED COFFEES.

We have now roasting machinery both in London and Manchester, fitted with all the latest improvements.

This enables us to supply the freshly-roasted article in the most expeditious manner; and great care is taken to finish off the berry to suit the particular requirements of customers.

PACKED COFFEE.

Great quantities of rubbish have been, and are being, sold under different fancy names. The extraordinary proportions the demand for these articles has assumed have led the Government to impose a special tax on all mixtures, so as to compensate for the loss of revenue on Coffee caused by their consumption.

This will now put the honest trader on a fair footing, and with the great advantage to the consumer that he can make sure of getting a really good and pure article at a reasonable price.

We therefore now sell Coffees of different grades and qualities, both pure and mixed with Chicory, at prices which will be sure to command a good sale.

Our excellent machinery, our economical arrangements, the large scale of our operations, and the well-known beneficial results of division of labour, will enable us to supply Societies cheaper and better than it is possible for them to do for themselves.

COCOA AND CHOCOLATE.

In order to give Societies the opportunity of getting their supplies at the lowest possible cost, we have commenced the production of the various kinds of Cocoa and Chocolate most in demand.

The greatest care is exercised in the manufacture, ingredients of the best quality only being used. The works are fitted with efficient and modern machinery. The Society is thus in a position to manufacture all classes of Cocoas and Chocolates showing better quality and value than any others in the market.

Special attention is drawn to the following:—

PURE CONCENTRATED EXTRACT IN TINS.

This Cocoa is similar in character to the best of the well-known Dutch Cocoas. It possesses great strength, combined with exquisite flavour, and at the same time is most economical in use. We claim for this Cocoa that it is at least as good as any other maker's, at the same time being considerably lower in price.

PURE CONCENTRATED ESSENCE IN PACKETS.

A preparation of the finest selected Cocoa nuts from which the greater part of the fat has been extracted; *contains no sugar and no starch.* With this powder can be made a cup of Cocoa thin in body, like Tea and Coffee, but with far more nutritive qualities than either of these.

PREPARED BREAKFAST COCOA.

Made of the finest grown nuts and mixed with such other ingredients of the best quality as are necessary to produce a high-class powder, soluble and easy of digestion.

HOMŒOPATHIC COCOA.

We make four qualities, each of which will be found not inferior to the Cocoas usually sold by this name.

PEARL COCOA.

Great care is taken to produce this popular Cocoa in the best form, and the constantly increasing sales show our efforts to have been successful.

ROCK CHOCOLATE.

A preparation of finest Nibs and best Loaf Sugar; specially recommended. The following also are made, each in various qualities:—

Rock Cocoa, Flake, Cocoa Nibs, &c.

CHOCOLATE CONFECTIONERY.

We are now turning out large quantities of this article in various forms of ½d., 1d., and 2d. Cakes, Drops, also Creams and Cream Cakes, and many other varieties of Chocolate Confectionery.

Societies who have not yet tried these are strongly recommended to do so, for, whilst being very wholesome and nutritious both for children and adults, the sale will be found to be a profitable source of revenue, which Societies may as well secure for themselves as leave to the neighbouring confectioner. In our price list are quoted over twenty different sorts of Eating Chocolates to select from.

The majority of these are now supplied in 1d. packets.

We think Chocolates put up in this form may be found particularly suited to the needs of Co-operative Societies, since all loss by leakage or exposure is avoided, and no time is occupied in weighing and wrapping. We believe no other manufacturer is packing Chocolates in this way, so that Societies will have the monopoly of this novelty.

With these advantages we hope for an extensive sale.

Drapery Department.

CENTRAL SALEROOM AND WAREHOUSE:

DANTZIC STREET,
MANCHESTER.

NEWCASTLE BRANCH SALEROOM AND WAREHOUSE:

WATERLOO STREET,
NEWCASTLE-ON-TYNE.

LONDON BRANCH SALEROOM AND WAREHOUSE:

LEMAN STREET,
LONDON, E.

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THE especial attention of Societies is called to the above Department, which is equipped to serve them in the best possible manner.

Hosiery Department.

Hosiery of every Kind and Make.

Wools, Worsted and Yarns (by the best spinners), Linen and Paper Fronts and Collars, Cuffs; Kid, Wool, Lisle, and Silk Gloves; Wool, Union, and Oxford Shirts; Duck Jackets; Men's and Boys' Hats and Caps.

Haberdashery and Smallwares

OF EVERY DESCRIPTION.

Silk and Velvet Buttons, Trimmings, Ribbon Velvets, &c.

Millinery Department.

We beg to call especial attention to this Department, and would ask your hearty support. The Stock is well assorted, and consists of Felt and Straw Hats, Plain and Fancy Straw Bonnets, in all the newest shapes; Ribbons in Silk, Satin, and Velvet, all shades; Feathers in Ostrich, Fancy Wings, Birds, Ospreys, &c.; French and English Flowers, rich new shades, mounted and unmounted; Silk and Cotton Laces, Spot Nets, Embroidered Crapes, and Leises; Ornaments, newest designs in Jet, Steel, &c.; Silks, Velvets, and Plushes; Steel, Jet, and Gold Millinery Trimmings, newest styles; Trimmed Millinery, Black and Coloured; Children's Millinery, in Hoods, Hats, and Bonnets.

Fancy Goods.

Ladies' and Gents' Scarfs, Ribbons, Laces, Stays, Corsets; Umbrellas in Silk, Alpaca, Gloria, Dagmar, and Satin.

Mantle Department.

MANTLES.

WE HAVE COMMENCED the MANUFACTURE of MANTLES,

AND LIKEWISE KEEP

A WELL-ASSORTED STOCK

FROM THE BEST

ENGLISH MANUFACTURERS.

DRESS DEPARTMENT.

BLACK AND COLOURED MERINOES, FRENCH TWILLS,
SATEENS, SCOTCH AND GERMAN PLAIDS,
BLACK AND COLOURED SILKS AND VELVETS.
SCOTCH AND YORKSHIRE SHAWLS,
WOOL HANDKERCHIEFS,
FELT AND OTHER SKIRTS, &c.
LACE, LENO, AND HARNESS CURTAINS AND
BLINDS, WOOL, DAMASK, &c.

Manchester Department.

THIS DEPARTMENT COMPRISES EVERY KIND OF

SCOTCH, IRISH, & BARNSLEY LINENS;

BLEACHED CALICOES, SHEETS, AND SHEETINGS;

Oxford, Harvard, Flannelettes, and other Cotton Shirtings;

SILESIAS, AND EVERY CLASS OF DYED AND PRINTED LININGS;

Prints, Cretonnes, Damasks, Window Hollands,

TABLE COVERS, TOILET QUILTS,
TOILET COVERS, TABLE BAIZES,
LEATHERS, CLOTHS, &c., &c.

THE Stocks are bought from the best manufacturers, and the finish in all cases is carefully attended to. All Goods are sold under their correct quality and numbers, and the widths and lengths guaranteed. These facts should always be considered when comparing the "Wholesale's" prices with those of other firms.

Grey Department.

WIGANS, MEXICANS, AND TWILLS

IN VARIOUS WIDTHS AND QUALITIES.

YORKSHIRE, LANCASHIRE, AND SAXONY FLANNELS.

Bath, Bury, and Twill Blankets.

BLEACHED AND GREY SHEETS.

ALHAMBRAS

OF EVERY KIND AND IN ALL SIZES.

UNION AND WOOL SHIRTINGS,

LINSEYS, KERSEYS, LAMBSKINS,

Down Quilts, &c.

Woollen Department,

DANTZIC STREET, MANCHESTER.

WOOLLENS.

IN THIS DEPARTMENT THERE IS ALWAYS A LARGE SELECTION OF THE NEWEST STYLES IN

Woollen & Worsted Coatings, Trouserings, & Suitings,

OF THE BEST QUALITY AND VALUE, MANY OF WHICH ARE MADE AT OUR OWN MILLS.

READY-MADES

IN

Men's, Youths', and Boys' Garments,

OF EVERY DESCRIPTION AND PRICE.

Special orders for Garments to Measure receive our prompt attention.

A Factory, specially arranged for this branch of the department, has been established beside our Furniture Works at Broughton, and we ask you to give us an opportunity of doing your trade.

TRIMMINGS.

Black & Coloured Silesias, Striped Silesias & Sateens,

IN ALL COLOURS AND DESIGNS.

BUCKRAMS, CANVASES, JEANS, POCKETINGS, BLACK AND COLOURED ITALIANS AND SERGES

AT ALL PRICES.

For choice quality and value this department cannot be beaten by any house in the trade, and merits the support of every society.

Furnishing Department,

HOLGATE STREET, MANCHESTER.

ILLUSTRATED CATALOGUE AND PRICE LIST
SENT FREE OF CHARGE TO ANY SOCIETY ON APPLICATION.

THE STOCK IN THIS DEPARTMENT
CONSISTS OF
FURNITURE, CARPETS, FLOORCLOTHS, &c.; HARDWARE,
CLOCKS. WATCHES, AND JEWELLERY;
BRUSHES AND FANCY GOODS.

WE CAN ALSO SUPPLY
GAS ENGINES, GROCERS' MACHINERY,
AND EVERY KIND OF SHOP FITTINGS REQUIRED.

MOST OF
OUR FURNITURE IS NOW MANUFACTURED AT OUR
CABINET WORKS,
AND WE ARE PREPARED TO
ESTIMATE FOR SHOP, OFFICE, AND LIBRARY FIXTURES, &c.

Crockery Department, Longton.

OUR Depôt in the Potteries is stocked with a choice selection of goods of the best manufacture suitable for the requirements of societies, and as it is now very much enlarged, also with the addition of a fine showroom, we strongly recommend societies to send their buyers to Longton to look at our stock, especially as they will often be able to pay their expenses by job purchases. At the same time we beg to call your attention to the following advantages we possess over manufacturers :—

FIRST :

We can supply crates of mixed goods of all kinds—

EARTHENWARE, CHINA, JET, ROCKINGHAM, GLASS, YELLOW and BROWN WARE; also FANCY VASES, &c.

SECONDLY :

With the exception of Tea, Toilet, and Dinner Patterns not stocked, we can supply all general articles and goods from our list promptly, which manufacturers cannot continuously do, as they are certain to run out of stock of some kind very often, and having greatly enlarged our premises we can execute orders quicker than in the past.

THIRDLY :

We can supply very small quantities of each article—which, with the above-mentioned promptitude, will enable you to keep a very small stock, and place it within the power of the smallest store to keep crockery to advantage.

FOURTHLY :

By combining our resources of capital with the services of a buyer on the spot we are able to purchase goods from the *best makers*, and supply them on as good terms as can be got by dealing direct with the manufacturers, and in greater variety.

FIFTHLY :

In dealing with manufacturers there is generally a heavy charge for crates, which will be avoided, as we find crates and credit on return as per page 6 in list.

We have added Sanitary Goods, such as Closets, Lavatory Basins, &c., &c., and can strongly recommend these for price and quality.

We trust that these considerations will induce every society to add crockery to their other business; and as we keep a number of crates on hand ready packed, consisting of China, Earthenware, Rockingham, and Jet Teapots, &c., suitable for beginning in this branch of trade, we shall be pleased to forward one immediately to any society which will intimate their willingness to give it a trial. For assortment of crates, &c., see our Price List, free to any society on application, also our Illustrated Book of designs.

N.B.—All orders to be sent direct to Longton.

SOLE AGENTS FOR

The Brownfields Guild Pottery Society Limited.

Crumpsall Works.

MANUFACTURERS OF

BISCUITS & SWEETS, &c.

WAREHOUSES:

BALLOON STREET, MANCHESTER;
WATERLOO STREET, NEWCASTLE-ON-TYNE;
LEMAN STREET, LONDON, E.;
AND
CHRISTMAS STREET, BRISTOL;
WHERE ALL ORDERS MUST BE SENT.

To supply some of the requirements of the Retail Stores, this Society established these Works in 1872. By the rules of the Society the custom of the private trader is refused, and none but registered Co-operative Societies are supplied. The Retail Stores, members of the Wholesale Society, are the proprietors of these Works, and, as such, the exclusion of private trade is a regulation made by them. We have, therefore, a just claim upon the Stores that they should support their own Works, whilst we acknowledge that they have a claim upon us to supply a pure and serviceable article, as good and as cheap, of its kind and quality, as can be had elsewhere.

THE BISCUITS ARE MADE OF THE PUREST MATERIALS,

Nearly all the flour used being of co-operative manufacture. The machinery employed is of the latest style and most perfect character. The Biscuits produced are such that we confidently invite comparison, and urgently solicit all Co-operative Societies to give them a trial.

IN THE MAKING OF SWEETS

We boil the best of sugar (all cane); employ the best skill; use only vegetable colouring matter, all of which is perfectly harmless; and we can confidently challenge analysis. Our Sweets need only be tried to be approved.

LOZENGES.

Our machinery is of the newest and most approved construction for the making of Lozenges in all the varieties mostly in request. The difference in value between one Lozenge and another depends almost entirely on the quantity, strength, purity, and delicacy of the flavouring used. In these particulars we aim to excel, and we invite comparison. We trust our friends will give this department a trial, and have no doubt the article produced will bear comparison with the productions of the best makers.

CITRATE OF MAGNESIA, AND SHERBET, OR LEMON KALI,

Are sometimes pressed upon the attention of the Stores as "a special cheap quality." They can be made "cheap" only by keeping out the Acids, which are expensive, and putting in more sugar. This sort of cheapness makes the article more agreeable to some tastes, but certainly much less useful and less costly. We aim at making the C.W.S. Citrate and Sherbet the best value.

"WHEATSHEAF" BAKING POWDER,

In Packets, Card Boxes, and Tins, as per Monthly List,

Has been tested in practical use with that of the best makers, and with favourable results.

Several cases have recently occurred in which retail grocers have been heavily fined, in addition to the disagreeable public exposure, in consequence of selling Baking Powder containing a large proportion of Alum instead of Tartaric Acid. Our friends will find by reference to the C.W.S. Price List that Alum costs from £6 to £7 per cwt. less than Tartaric Acid. Thus, to make money, the manufacturer produces an article which, used in the making of bread or other eatables, yields a food which is injurious to health.

C.W.S. "WHEATSHEAF" BAKING POWDER DOES NOT CONTAIN ANY ALUM.

C.W.S. "WHEATSHEAF" BLACK LEAD,

In Oblong Blocks, Round Blocks, and Powder in packets, as per Monthly List.

We Block the best of Lead, and our produce cannot be excelled in the brilliancy and polish it imparts. Our Loose Black Lead, in 1oz., 2oz., and 4oz. packets, we can confidently recommend.

We also make and prepare a large variety of Sundries, particulars of which may be seen in the C.W.S. monthly price list.

Wheatsheaf Works, Leicester.

Warehouses:

BALLOON STREET, MANCHESTER;
WATERLOO STREET, NEWCASTLE-ON-TYNE; LEMAN STREET, LONDON, E.;
AND CHRISTMAS STREET, BRISTOL.

Salerooms:

LEEDS, HUDDERSFIELD, NOTTINGHAM, BLACKBURN, BIRMINGHAM,
NORTHAMPTON, AND CARDIFF.

CAST YOUR EYE ON THIS!

NOTHING SUCCEEDS LIKE SUCCESS!

These Works were established in 1873, and the first year's production amounted to about 90,000 pairs, valued at £23,720.

This has increased until last year (1895) the production had reached

1,191,183 Pairs,

£271,567 Value.

We Manufacture every class of

BOOTS AND SHOES,

IN HAND SEWN, GOODYEAR WELTS,
MACHINE SEWN, FAIR STITCHED, SEW ROUNDS,
RIVETTED, STANDARD SCREWED,
WOOD PEGGED, &c., &c.,

For All Sorts and Conditions of Men.

THE HIGHEST TRADES UNION WAGES PAID.
THE VERY BEST MATERIALS USED.
THE WORKSHOPS FITTED UP WITH BEST APPLIANCES
FOR THE COMFORT OF THE EMPLOYÉS.

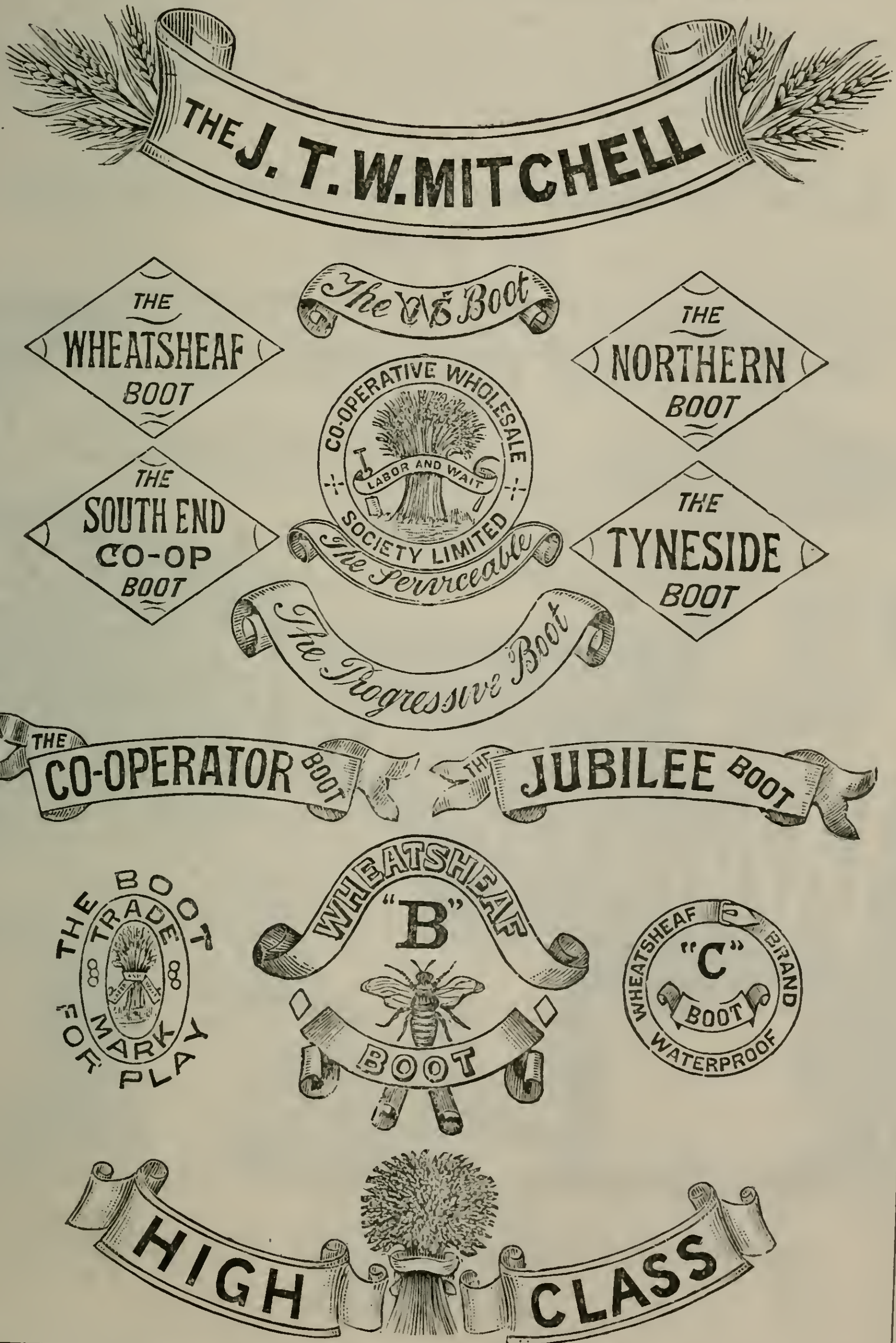
The Fit, Style, Quality, and Price of the Goods are unsurpassed.

The wants of every class of the community studied.

THE FOLLOWING ARE A FEW OF OUR

NAMED GOODS,

WHICH WE CAN HIGHLY RECOMMEND:—



CLOTH GAITERS

OF EVERY DESCRIPTION

MADE IN ALL SHADES OF CLOTH.

Samples on Application to Manchester, Newcastle, and London.

ALL OUR PRODUCTIONS BEAR THE SOCIETY'S TRADE MARK.

IN OUR ILLUSTRATED LIST

We give the numbers of those usually kept in stock at Manchester, as well as at the branch warehouses in Newcastle and London. If Societies require any kind of goods not mentioned in the *List*, we shall be glad to make for them upon receiving instructions.

Although there is a growing demand for Low-priced Goods, which we endeavour to meet, we have in no case departed from the principle which has been adhered to since the commencement of these Works—of always using material of known excellence, and *discarding the use of all substitutes for honest leather.*

Does not the ever-increasing demand for our productions warrant us in stating that our goods are equal, if not superior, to those supplied by our competitors?

In addition to the Wholesale trade, we make upwards of 300 pairs of Bespoke and Measured Goods weekly. Every effort is made to supply these orders promptly, but many delays, misfits, and mistakes would be avoided if our friends, when ordering, would carry out our instructions for Measurement as set out on the following page. These specially-arranged Order Books can be obtained *free of charge* from either the Central or Branch Warehouses, or from the Works.

Cut Soles for Repairing purposes supplied in any quantity or quality. Price List and Samples sent on application.

Orders for Regular Stock should be sent to the Warehouses—

1, Balloon Street, Manchester;
Waterloo Street, Newcastle-on-Tyne; Leman Street, London, E.

Orders for Bespoke or Measured work should be sent direct to Wheatsheaf Works, Leicester, *to prevent delay.*

CO-OPERATORS AND TRADE UNIONISTS! support your own Works, and go in for the

Wheat Sheaf Brand

BOOTS, SHOES, AND GAITERS,

AND TAKE NO OTHER.

YOU CAN TELL THEM!!!

LOOK FOR THIS STAMP

ON EVERY PAIR.

BESPOKE ORDER SHEET.

Date,..

Co-operative Wholesale Society Limited,

WHEATSHEAF WORKS, LEICESTER.

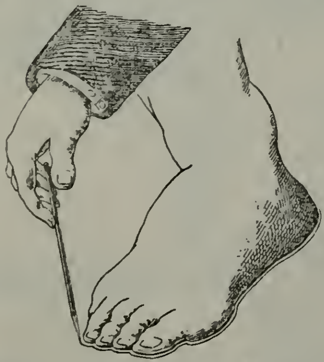
Please supply the ....*Co-operative Society.*

Number of Boot, or Description and Special Instructions:

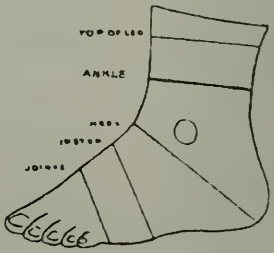
Pairs.	Size of Foot, measured by Size Stick.	Size of Last to be made on.	Height of Boot from Heel to the Top.	Width.	Price.

We must respectfully request you to give us the Size of Last which you require the Goods to be made on, and in addition a diagram taken on paper showing the outline of the foot. The diagram should be taken in the manner shown in the sketch below, the pencil to be held exactly upright. We also give you below a sketch showing the exact places where the different measurements of the foot should be taken in order to secure a good fit. Take the dimensions of the foot in inches, and mark across the lines which are left blank for the purpose. Where the ordinary height of boot is required no measure need be given for the top of leg, but where a higher leg is required the height must be given, and also the measurement round top of leg.

METHOD OF TAKING DIAGRAM.



METHOD OF TAKING MEASUREMENTS.



NOTE.—When the Measures and Diagram are taken the person should be in a sitting position.

Heckmondwike Boot & Shoe Works.

Warehouses:

BALLOON STREET, MANCHESTER;
WATERLOO STREET, NEWCASTLE-ON-TYNE;
LEMAN STREET, LONDON, E.; CHRISTMAS STREET, BRISTOL.

Salerooms:

LEEDS, HUDDERSFIELD, NOTTINGHAM, BLACKBURN, BIRMINGHAM,
NORTHAMPTON, AND CARDIFF.

◆

Orders must be addressed either to Central Office, or to the Branch Establishments at Newcastle or London.

◆

THESE Works having been considerably enlarged, we are now in a position to double our production, and we appeal to societies to give us their support.

The Goods we make are **Men's and Youths' Strong Nailed,** suitable for miners, quarrymen, farm labourers, masons, joiners, railway servants, &c. We also make in **Men's and Boys'** a quantity of **Medium Strength** with **Smooth Bottoms,** with nails driven up, suitable for a working boot in lighter occupations.

We also make **Women's Strong Laced Mill Boots.** In the manufacture of our goods, we pay special attention to the selection of material used for the inner sole, which is the foundation of a strong boot, and on which depends entirely the wear, and when re-soled and heeled gives the repairer a good foundation to work upon. This very important feature applies to the whole of the goods we make, from the lowest priced ones upwards.

We desire it to be fully understood that none of our manufactures contain paper or composition leather board, but solid leather; and, therefore, if in some instances our prices are found to be somewhat higher than goods of similar appearance, you may rely upon it the difference of the price is in the quality.

◆

CURRYING DEPARTMENT.

The above Department is now in full working order, and we are able to supply societies with any of the following Goods:—

LEVANT HIDES.
,, KIPS.
,, KIP SHOULDERS.
,, HORSE SHOULDERS.
,, ,, BELLIES.

MEMEL HIDES.
,, HIDE BUTTS.
,, KIPS.
SATIN HIDES.
,, HIDE SHOULDERS.

SATIN KIPS.
,, KIP SHOULDERS.
WAXED HIDE BUTTS.
,, KIP BUTTS.
,, E. J. CALF.

Dunston-on-Tyne Flour Mills.

THESE Mills are replete with every modern invention, and are worked on thoroughly scientific and up-to-date lines. We can assure all Societies that the quality of the productions is not excelled, and we confidently ask for a trial.

We take this opportunity of asking for your loyal support in our endeavours to make the Productive Works a success, and would also remind you that in supporting the C.W.S. Works you are assisting in some measure to solve the all-important Capital *versus* Labour problem.

We manufacture the following grades of **FLOUR** at the Mills, which are well worth your attention:—

"UNITY PATENT."

Equal to Hungarian Roller Flour.

"EXTRA SUPERS."

A high-class Flour for family use.

"SUPERFINES."

A Flour of excellent value.

Co-operators, support your own Productive Works!!!

Irlam Soap Works.

Salerooms and Warehouses:

BALLOON STREET, MANCHESTER;
WATERLOO STREET, NEWCASTLE-ON-TYNE;
LEMAN STREET, LONDON, E.;
CHRISTMAS STREET, BRISTOL;
LEEDS, HUDDERSFIELD, NOTTINGHAM, BLACKBURN, BIRMINGHAM, NORTHAMPTON, AND CARDIFF.

THESE Works, and the processes carried on, have been worked out on scientific lines, and the Soaps manufactured are subjected to searching chemical tests before being put on the market.

We manufacture all the ordinary Household, Laundry, and Toilet Soaps, and, in addition, the following specialities:—

Finest French Milled Toilet Soaps.—"Triple Bouquet"—Roses, Violets, and Lilac. "Cold Cream Soap," superfatted, specially prepared and recommended for tender skins. Glycerine and Cucumber, Medical Carbolic, and Shaving Soaps.

Transparent Soap, neutral and free from all injurious ingredients.

Re-melted Toilet Soaps.—Rose, Oatmeal, Brown Windsor, Carbolic, &c.

Soft Soaps, in Firkins and Tins.

"Laundry Belle" and ***"Wheatsheaf Tablets"*** (registered).—Perfumed 12oz. Tablets, possessing great lathering and cleansing properties.

"Congress," 16oz. Tablets, specially noted for its easy lathering and great durability.

"Flora" (registered), the New Soap, specially perfumed and purified for family use.

CHEMICALLY PURE GLYCERINE.

CO-OPERATORS! Buy the Soaps made at your own Works with your own Capital.

West Hartlepool Lard Refinery

AND

Egg Pickling Warehouse,

OXFORD AND BALTIC STREETS, WEST HARTLEPOOL.

WE HAVE PURCHASED THE

LARD REFINERY AND EGG PICKLING WAREHOUSE

of Messrs. Furness and Co., West Hartlepool, and, having commenced to refine our own Lard, we now appeal to Committees to give us their entire trade, and hope that when ordering Lard they will specially ask to be supplied with

"Silver Medal" C.W.S. Brand.

It is guaranteed absolutely pure, refined and packed at your own Refinery at West Hartlepool.

These Works are replete with the most improved machinery and plant for carrying on Lard refining and packing.

We wish to particularly draw the attention of Committees to the fact that the purchase of these Works for the refining of Lard and the pickling of Eggs has been undertaken to bring the producer and the consumer nearer together, and thus save the intermediate profit of the middleman.

Preserve Works,

MIDDLETON JUNCTION.

MINCEMEAT A SPECIALITY.

SAMPLES SENT FREE ON APPLICATION.

COMPARISON INVITED.

Livingstone Mills, Batley,

YORKSHIRE,

WOOLLEN MANUFACTURERS.

Salerooms and Warehouses:

1, BALLOON STREET, MANCHESTER;
WATERLOO STREET, NEWCASTLE-ON-TYNE;
AND LEMAN STREET, LONDON, E.

Orders should be sent either direct to the Central Office, 1, Balloon Street, Manchester, or to the Branches, Waterloo Street, Newcastle, and Leman Street, London.

WOOLLENS AND WORSTEDS.

THE Productions of our Batley Mill are not to be surpassed in either Quality, Style, or Price.

We are now manufacturing some of the choicest patterns in

Fancy Worsted Trouserings and Tweeds.

Our INDIGO BLUE SERGES AND WOADED BLACK WORSTED COATINGS are so well known throughout the Stores as to need no further description.

We have lately added to our Weaving Plant some of the newest and most efficient Fast Looms and Beaming Machinery, so that we are now in a position to meet satisfactorily the increasing demands of our customers.

PATTERN CARDS WILL BE SENT ON APPLICATION.

CO-OPERATORS! Ask at your STORES for BATLEY CLOTHS.

See that you get them, and don't be persuaded to take any other.

Productive Societies

FOR WHICH THE

CO-OPERATIVE WHOLESALE SOCIETY ARE AGENTS.

The Agricultural and Horticultural Association Limited.

Reliable Farm and Garden Seeds; special Manures for Fruit, Vegetable, and Garden Crops.

The Airedale Manufacturing Society Limited.

Manufacturers of Black Alpaca Lustres, Black Brilliantines, Black and Coloured French Twills, Mohair Glacés, Black and Coloured Persian, Russel and Cable Cords, Wool Serges, Black Orleans, Black and Coloured Italians, Black and Coloured Figures, Mottles, Mixtures, Stripes, &c., &c.

The Coventry Co-operative Watch Manufacturing Society Limited.

The Watches supplied by this Society we can well recommend as being of uniform good quality, and they engage to keep them in good going order for twelve months from date of purchase. We trust that individuals, through their societies, will give us their orders, so that we may do a larger trade in this department. Watches, from £2 10s. to £25 each.

The Bromsgrove Nail Manufacturing Society Limited.

The Dudley Productive Co-operative Society Limited.

Manufacturers of all kinds of Galvanised Goods, Buckets, Fenders, &c.

The Eccles Industrial Manufacturing Society Limited.

Manufacturers of Toilet, Alhambra, and Damask Quilts, by hand and power; also Twill Sheetings, all of the best quality, and in tastily-arranged patterns.

Having repeatedly compared the Quilts produced by the Eccles Manufacturing Society with the Quilts made by other firms, we are thoroughly satisfied that those made by them are equal, and, when cost is considered, superior, to those sold by other makers. All Toilet and Honeycomb Quilts sold by the Co-operative Wholesale Society are made by the Eccles Manufacturing Society, and all members, when purchasing, should ask for the Eccles Quilts, and insist upon having them.

Brownfields Guild Pottery.

Midland Tinplate Workers' Society Limited.

The Hebden Bridge Fustian Manufacturing Society Limited.

Manufacturers of Cords, Moles, Velveteens, Imperials, Diagonals, Sateens, Twills, &c., in every variety and colour; Fustian Clothing, ready-made and to order. Samples and prices on application.

The Heckmondwike Manufacturing Society Limited.

Manufacturers of Carpets, Horse Cloths, Blankets, &c.

The Lancashire and Yorkshire Co-operative Productive Society Limited.

Manufacturers of Flannels, plain and coloured, of guaranteed purity and excellence of manufacture, combined with reasonable prices. Societies ordering sufficiently large may, if desired, have the goods finished to suit their special markets.

The Leek Silk Twist Manufacturing Company Limited.

The Leicester Elastic Web Manufacturing Society Limited.

The Leicester 2nd Hosiery Manufacturing Society Limited.

We are now their sole agents, and keep a stock of all classes of goods made by them.

The Paisley Manufacturing Society Limited.

Manufacturers of Saxony Wool Shawls and Plaids, in plain and fancy checks, Saxony Wool Handkerchiefs and Scarfs, Dress Tartans, and Twilled and Plain Wool Shirtings. A large variety of patterns to select from.

The Rochdale Pioneers' Society Limited.

Manufacturers of Tobacco, Snuffs, &c.

The Shepshed Hosiery Manufacturing Society Limited.

The Sheffield Co-operative Cutlery Manufacturing Society Limited.

Keighley Ironworks Society Limited,

Manufacturers of Wringing Machines, &c.

REGULAR STEAM SERVICE

BETWEEN

GARSTON (LIVERPOOL) & ROUEN.

OFFICES:

CENTRAL: BALLOON STREET, MANCHESTER.
LIVERPOOL: 7, VICTORIA STREET.
GARSTON: NEW DOCK. ROUEN: 2, RUE JEANNE D'ARC.

A FIRST-CLASS POWERFUL AND FAST STEAMER DESPATCHED FORTNIGHTLY.

EXTRA STEAMERS TO SUIT THE REQUIREMENTS OF THE TRADE.

Goods carried at through rates, with quick despatch, between Liverpool, Manchester, Birmingham, and North of England Towns, and Paris, Lyons, Beauvais, Lille, and North and East of France.

For Rates of Freight and other information, apply to the Society's offices, as above.

ON the outward voyages from Garston, in addition to sundry goods, the shipments consist largely of caustic soda, bleaching powder, and other chemicals from Widnes and St. Helens districts—machinery from Manchester and Bolton and neighbouring towns—American and East Indian cotton which has arrived at Liverpool and been ordered for shipment to Rouen, the principal seat of cotton industry in France. There are also considerable shipments of copper. On arrival of the goods at Garston they are taken directly alongside our steamers, in the railway wagons, and then by means of powerful hydraulic cranes they are transferred from the wagons to the hold of the steamers. By this means shippers may rely on the shipments being effected with prompt despatch, and we avoid the risk of damage which sometimes occurs when cartage is employed.

At Rouen the steamers are berthed in close proximity to the railway line, so that goods can be landed from the steamers direct on to the railway wagons. Or when consignees order goods to be forwarded from Rouen by water, the river barges are loaded alongside the steamer, and these are towed by powerful steam tugs up the Seine to Paris. Providing no exceptional delay occurs, the transit up the river occupies little over two days.

On the return journey from Rouen the steamer's cargo principally consists of sugar in bags and cases coming from Paris, also chemicals, dye stuffs, flour, field seeds, metals, and besides there are sundry goods in cases, such as glassware, toys, haberdashery, and *articles de Paris.*

No effort is spared to ensure the steamer being despatched punctually from each port on the appointed dates, and as by this means a regular service is maintained, we are favoured with a large traffic from general shippers.

GOOLE AND CALAIS LINE OF STEAMERS.

CENTRAL OFFICES: 1, BALLOON STREET, MANCHESTER.
GOOLE OFFICES: STANHOPE STREET.
CALAIS OFFICES: RUE DE MADRID.

WEEKLY SERVICE BETWEEN

GOOLE AND CALAIS.

THE powerful and fast steamship **"PROGRESS,"** or other steamer, will (weather and other casualties permitting) sail regularly between Goole and Calais, leaving Goole every **Wednesday** and Calais every **Saturday.** This line is in direct communication at Goole with the L. and Y. and N. E. Railway Companies, whose wagons can be loaded direct from the steamers, thereby ensuring despatch with the least risk of damage to the goods carried by the line.

The Aire and Calder Navigation Company run their canal boats alongside the Company's steamers, so that all who prefer their goods carried by canal can have them loaded direct into the Aire and Calder Company's boats, and *vice versâ.*

At Calais the steamers are berthed near the Custom House and opposite the goods warehouse of the North of France Railway Company, where the goods can be stored waiting the arrival of the steamers.

The North of France Railway Company have a line of rails laid to the place where the steamers are berthed, so that goods entrusted to this line can be safely and quickly despatched to their destination. The Goole and Calais route is the best and cheapest between the great manufacturing centres of the North of England and those of the North of France; and shippers in those districts will find it to their advantage to give this line a trial.

GOODS ARE CARRIED AT THROUGH RATES

FROM ANY PART OF THE UNITED KINGDOM TO THE PRINCIPAL CITIES OF FRANCE AND THE CONTINENT.

For Rates of Freight and other information apply as above.

GOOLE & HAMBURG LINE OF STEAMERS.

CENTRAL OFFICES: 1, BALLOON STREET, MANCHESTER.
GOOLE OFFICES: STANHOPE STREET.
HAMBURG BROKER: D. FUHRMANN (NISSLE AND GÜNTHER SUCCESSOR),
DOVENHOF, HAMBURG.

REGULAR SERVICE BETWEEN

GOOLE AND HAMBURG.

THE POWERFUL AND FAST STEAMSHIPS

"LIBERTY," "EQUITY," and "FEDERATION,"

AND OTHER STEAMERS,

WILL (WEATHER AND OTHER CASUALTIES PERMITTING) SAIL REGULARLY BETWEEN GOOLE AND HAMBURG,

LEAVING EACH PORT FOUR TIMES A WEEK.

Extra Steamers to suit the requirements of the Trade.

THIS line is in direct communication at Goole with the L. and Y. and N. E. Railway Companies, whose wagons can be loaded direct from the steamer, without the risk or expense of cartage. This is of great importance to shippers, as it ensures a quick delivery of their goods in a clean and undamaged condition.

The Aire and Calder Navigation Company run their canal boats alongside the Societies' steamers, so that all who prefer their goods carried by canal can have them loaded direct into the Aire and Calder Company's boats, and *vice versâ.*

At Hamburg the steamers are berthed alongside the warehouses of the Railway Company, where the goods can be stored waiting the arrival of the steamers.

GOODS ARE CARRIED AT THROUGH RATES

FROM ANY PART OF THE UNITED KINGDOM TO THE PRINCIPAL CITIES OF GERMANY AND THE CONTINENT.

For Rates of Freight and other information apply as above.

STEAM SERVICE

BETWEEN

MANCHESTER AND ROUEN.

SINCE THE UNOFFICIAL OPENING DAY OF THE MANCHESTER SHIP CANAL, JANUARY 1st, 1894, WE HAVE HAD THE STEAMSHIP

"PIONEER"

ENGAGED IN TRADE

BETWEEN

MANCHESTER and ROUEN.

She was the first steamer registered at the Custom House as belonging to the port of Manchester; also the first trading steamer that arrived in the port.

The outwards traffic from Manchester has not yet been so large as we hoped would be the case, but homewards the steamer has loaded fairly well, although at low rates of freight, to compete with other routes.

THE ROUND TRIP IS DONE FORTNIGHTLY.

PRINCIPAL EVENTS IN CONNECTION WITH THE CO-OPERATIVE WHOLESALE SOCIETY

SINCE ITS COMMENCEMENT.

Year.	Day.	Events.
1863	Aug. 11	Co-operative Wholesale Society enrolled.
1864	Mar. 14	Co-operative Wholesale Society commenced business.
1866	April 24	Tipperary Branch opened.
1868	June 1	Kilmallock Branch opened.
1869	Mar. 1	Balloon Street Warehouse opened.
,,	July 12	Limerick Branch opened.
1871	Nov. 26	Newcastle-on-Tyne Branch opened.
1872	July 1	Manchester Boot and Shoe Department commenced.
,,	Oct. 14	Bank Department commenced.
1873	Jan. 13	Crumpsall Works purchased.
,,	April 14	Armagh Branch opened.
,,	June 2	Manchester Drapery Department established.
,,	July 14	Waterford Branch opened.
,,	Aug. 4	Cheshire Branch opened.
,,	,, 4	Leicester Works purchased.
,,	,, 16	Insurance Fund established.
,,	Sept. 15	Leicester Works commenced.
1874	Feb. 2	Tralee Branch opened.
,,	Mar. 9	London Branch established.
,,	Oct. 5	Durham Soap Works commenced.
1875	April 2	Liverpool Purchasing Department commenced.
,,	June 15	Manchester Drapery Warehouse, Dantzic Street, opened.
1876	Feb. 14	Newcastle Branch Buildings, Waterloo Street, opened.
,,	,, 21	New York Branch established.
,,	May 24	S.S. "Plover" purchased.
,,	July 16	Manchester Furnishing Department commenced.
,,	Aug. 5	Leicester Works first Extensions opened.
1877	Jan. 15	Cork Branch established.

PRINCIPAL EVENTS IN CONNECTION WITH THE CO-OPERATIVE WHOLESALE SOCIETY

SINCE ITS COMMENCEMENT—CONTINUED.

Year.	Day.	Events.
1877	Oct. 25	Land in Liverpool purchased.
1879	Feb. 21	S.S. "Pioneer," Launch of.
,,	Mar. 24	Rouen Branch opened.
,,	,, 29	S.S. "Pioneer," Trial trip.
,,	June 30	Goole Forwarding Department opened.
1880	Jan. 30	S.S. "Plover" sold.
,,	July 27	S.S. "Cambrian" purchased.
,,	Aug. 14	Heckmondwike Boot and Shoe Works commenced.
,,	Sept. 27	London Drapery Department commenced in new premises, 99, Leman Street.
1881	June 6	Copenhagen Branch opened.
1882	Jan. 18	Garston Forwarding Depôt commenced.
,,	Oct. 31	Leeds Saleroom opened.
,,	Nov. 1	London Tea and Coffee Department commenced.
1883	July 21	S.S. "Marianne Briggs" purchased.
1884	April 7	Hamburg Branch commenced.
,,	May 31	Leicester Works second Extensions opened.
,,	June 25	Newcastle Branch—New Drapery Warehouse opened.
,,	Sept. 13	Commemoration of the Society's Twenty-first Anniversary at Newcastle-on-Tyne and London.
,,	,, 20	Commemoration of the Society's Twenty-first Anniversary at Manchester.
,,	,, 29	Bristol Depôt commenced.
,,	Oct. 6	S.S. "Progress," Launch of.
1885	Aug. 25	Huddersfield Saleroom opened.
,,	Dec. 30	Fire—Tea Department, London.
1886	April 22	Nottingham Saleroom opened.
,,	Aug. 25	Longton Crockery Depôt opened.
,,	Oct. 12	S.S. "Federation," Launch of.

PRINCIPAL EVENTS IN CONNECTION WITH THE CO-OPERATIVE WHOLESALE SOCIETY

SINCE ITS COMMENCEMENT—CONTINUED.

YEAR.	DAY.	EVENTS.
1887 ..	Mar. 14 ..	Batley Mill commenced.
„ ..	June 1 ..	S.S. "Progress" damaged by fire at Hamburg.
„ ..	July 21 ..	Manchester—New Furnishing Warehouse opened.
„ ..	Aug. 29 ..	Heckmondwike—Currying Department commenced.
„ ..	Nov. 2 ..	London Branch—New Warehouse opened.
„ ..	„ 2 ..	Manufacture of Cocoa and Chocolate commenced.
1888 ..	July 7 ..	S.S. "Equity," Launch of.
„ ..	Sept. 8 ..	S.S. "Equity," Trial trip.
„ ..	„ 27 ..	S.S. "Cambrian" sold.
„ ..	Oct. 14 ..	Fire—Newcastle Branch.
1889 ..	Feb. 18 ..	Enderby Extension opened.
„ ..	Nov. 11 ..	Longton Depôt—New Premises opened.
1890 ..	Mar. 10 ..	S.S. "Liberty," Trial trip.
„ ..	May 16 ..	Blackburn Saleroom opened.
„ ..	June 10 ..	Leeds Ready-mades Department commenced.
„ ..	Oct. 22 ..	Northampton Saleroom opened.
1891 ..	April 18 ..	Dunston Corn Mill opened.
„ ..	Oct. 22 ..	Cardiff Saleroom opened.
„ ..	Nov. 4 ..	Leicester New Works opened.
„ ..	„ 16 ..	Aarhus Branch opened.
„ ..	Dec. 24 ..	Fire at Crumpsall Works.
1892 ..	May 5 ..	Birmingham Saleroom opened.
1893 ..	„ 8 ..	Broughton Cabinet Factory opened.
1894 ..	June 29 ..	Montreal Branch opened.
1895 ..	Jan. 23 ..	Printing Department commenced.
„ ..	Oct. 2 ..	Irlam Soap Works opened.
„ ..	„ 10 ..	Loss of the S.S. "Unity."
1896 ..	April 24 ..	West Hartlepool Refinery purchased.
„ ..	June 26 ..	Middleton Preserve Works commenced.
„ ..	June 13 ..	Roden Estate purchased.
„ ..	July 1 ..	"Wheatsheaf" Record—first publication.

List of Telegraphic Addresses.

Central, Manchester :
"WHOLESALE, MANCHESTER."

Newcastle Branch :
"WHOLESALE, NEWCASTLE-ON-TYNE."

London Branch :
"CO-OPERATIVE, LONDON."

Bristol Depôt :
"WHOLESALE, BRISTOL."

Liverpool Office and Warehouse :
"WHOLESALE, LIVERPOOL."

Leeds Sale and Sample Rooms :
"WHOLESALE, LEEDS."

Crumpsall Works :
"BISCUIT, MANCHESTER."

Middleton Preserve Works :
"WHOLESALE, MIDDLETON JUNCTION."

Irlam Soap Works :
"WHOLESALE, CADISHEAD."

Cardiff Saleroom :
"WHOLESALE, CARDIFF."

Leicester Shoe Works :
"WHOLESALE, LEICESTER."

Heckmondwike Shoe Works :
"WHOLESALE, HECKMONDWIKE."

Batley Woollen Mill :
"WHOLESALE, BATLEY."

Leeds Ready-mades Factory :
"SOCIETY, LEEDS."

Longton Crockery Depôt :
"WHOLESALE, LONGTON (STAFF.)."

Corn Mill, Dunston-on-Tyne :
"WHOLESALE, DUNSTON, GATESHEAD."

Northampton Saleroom :
"WHOLESALE, NORTHAMPTON."

Telephonic Communication.

Our Premises in the following towns are directly connected with the Local Telephone System :—

	Nos.
MANCHESTER—GENERAL OFFICES	802
,, ,, ,,	2777
,, DRAPERY DEPARTMENT	908
,, ,, ,,	908A
,, FURNISHING DEPARTMENT	1755
CRUMPSALL—Sub to MANCHESTER GENERAL OFFICES.	
BROUGHTON—CABINET WORKS	3063
NEWCASTLE	1260
,,	1787
,,	*284
,, Blandford Street *284 and	1989
LONDON—GROCERY AND PROVISION	12072
,, DRAPERY	12071
,, TEA DEPARTMENT	12070
BRISTOL	40
LIVERPOOL	397
GARSTON	6
GOOLE	2
LEICESTER	235
LONGTON	4016
DUNSTON	1261
LEEDS READY-MADES, HOLBECK	1648
WEST HARTLEPOOL REFINERY	4286

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* Post Office System. All others National Telephone Company.

CO-OPERATIVE WHOLESALE SOCIETY LIMITED.

PAST MEMBERS OF GENERAL COMMITTEE.

Name.	Address.	Elected.	Retired.
*A. Greenwood	Rochdale	1863 August	1870 August.
†Councillor Smithies	Rochdale	1863 August	1869 May.
§James Dyson	Manchester	1863 August	1867 May.
Edward Hooson	Manchester	1863 August	1864 March.
		1866 May	1869 Dec.
John Hilton	Middleton	1863 August	1868 Nov.
*James Crabtree	Heckmondwike	1863 August	1864 March.
		1865 Nov.	1874 May.
		1885 Dec.	1886 March.
		1886 June	1889 Dec.
Joseph Thomasson	Oldham	1863 August	1864 March.
		1866 May	1869 Nov.
Charles Howarth	Heywood	1864 March	1866 October.
J. Neild	Mossley	1864 March	1865 Nov.
		1867 Nov.	1868 Nov.
Thomas Cheetham	Rochdale	1864 March	1865 Nov.
§E. Longfield	Manchester	1867 May	1867 Nov.
†J. M. Percival	Manchester	1868 Feb.	1868 May.
		1870 Feb.	1872 August.
		1876 March	1882 June.
Isaiah Lee	Oldham	1867 Nov.	1868 Nov.
§D. Baxter	Manchester	1868 May	1871 May.
J. Swindells	Hyde	1868 Nov.	1869 Nov.
T. Sutcliffe	Todmorden	1868 Nov.	1869 Nov.
‡James C. Fox	Manchester	1868 Nov.	1871 May.
W. Marcroft	Oldham	1869 May	1871 May.
Thomas Pearson	Eccles	1869 Nov.	1871 Nov.
R. Holgate	Over Darwen	1869 Nov.	1870 Nov.
A. Mitchell	Rochdale	1870 August	1870 Nov.
W. Moore	Batley Carr	1870 Nov.	1871 August.
‡Titus Hall	Bradford	1871 May	1874 Dec.
		1877 June	1885 Dec.

PAST MEMBERS OF GENERAL COMMITTEE—*continued.*

Name.	Address.	Elected.	Retired.
B. Hague	Barnsley	1871 May	1873 May.
		1874 Dec.	1884 Sept.
Thomas Shorrocks	Over Darwen	1871 May	1871 Nov.
‡R. Allen	Oldham	1871 August	1877 April.
Job Whiteley	Halifax	1871 August	1872 Feb.
		1873 Feb.	1874 Feb.
‡Thomas Hayes	Failsworth	1871 Nov.	1873 August.
Jonathan Fishwick	Bolton	1871 Nov.	1872 Feb.
J. Thorpe	Halifax	1872 Feb.	1873 Feb.
‡W. Johnson	Bolton	1872 Feb.	1876 June.
		1877 June	1885 March.
§H. Whiley	Manchester	1872 August	1874 Feb.
		1874 May	1876 March.
J. Butcher	Banbury	1873 May	1873 August.
H. Atkinson	Blaydon-on-Tyne	1873 August	1874 Dec.
J. F. Brearley	Oldham	1874 Feb.	1874 Dec.
Robert Cooper	Accrington	1874 Feb.	1876 June.
H. Jackson	Halifax	1874 Dec.	1876 June.
J. Pickersgill	Batley Carr	1874 Dec.	1877 March.
W. Barnett	Macclesfield	1874 Dec.	1882 Sept.
W. Nuttall	Oldham	1876 June	1877 Dec.
S. Lever	Bacup	1876 Sept.	1885 Sept.
		1886 March	1888 May.
F. R. Stephenson	Halifax	1876 Sept.	1877 March.
R. Whittle	Crewe	1877 Dec.	1886 March.
Joseph Mc.Nab	Hyde	1883 Dec.	1886 March.
James Hilton	Oldham	1884 Sept.	1890 January.
Samuel Taylor	Bolton	1885 Sept.	1891 Dec.
William P. Hemm	Nottingham	1888 Sept.	1889 August.
H. C. Pingstone	Manchester	1886 March	1894 June.
*§J. T. W. Mitchell	Rochdale	1869 Nov.	1895 March.
E. Hibbert	Failsworth	1882 Sept.	1895 June.
James Lownds	Ashton-under-Lyne	1885 March	1895 July.

* Held Office as President.
† Held Office as Secretary and Treasurer.
‡ Held Office as Secretary.
§ Held Office as Treasurer.

* PAST MEMBERS OF NEWCASTLE BRANCH COMMITTEE.

Name.	Address.	Elected.	Retired.
George Dover	Chester-le-Street	1874 Dec.	1877 Sept.
Humphrey Atkinson	Blaydon-on-Tyne	1874 Dec.	1879 May.
†James Patterson	West Cramlington	1874 Dec.	1877 Sept.
John Steel	Newcastle-on-Tyne	1874 Dec.	1876 Sept.
William Green	Durham	1874 Dec.	1891 Sept.
Thomas Pinkney	Newbottle	1874 Dec.	1875 March.
†John Thirlaway	Gateshead	1876 Dec.	1892 May.
William Robinson	Shotley Bridge	1877 Sept.	1884 June.
William J. Howat	Newcastle-on-Tyne	1877 Dec.	1883 Dec.
J. Atkinson	Wallsend	1883 Dec.	1890 May.
George Fryer	Cramlington	1883 Dec.	1887 Dec.
Matthew Bates	Newcastle-on-Tyne	1884 June	1893 June.
Richard Thomson	Sunderland	1874 Dec.	1893 Sept.
George Scott	Newbottle	1879 May	1893 Dec.

* PAST MEMBERS OF LONDON BRANCH COMMITTEE.

Name.	Address.	Elected.	Retired.
J. Durrant	Arundel	1874 Dec.	1875 Dec.
John Green	Woolwich	1874 Dec.	1876 Dec.
†Thomas Fowe	Buckfastleigh	1874 Dec.	1878 March.
†William Strawn	Sheerness	1875 Dec.	1882 March.
Frederick Lamb	Banbury	1876 Dec.	1888 Dec.
F. A. Williams	Reading	1882 June	1886 Sept.
J. J. B. Beach	Colchester	1886 Dec.	1888 Dec.

* Newcastle and London Branch Committees constituted December, 1874.

† Held Office as Secretary.

CO-OPERATIVE WHOLESALE SOCIETY LIMITED.

MEMBERS OF GENERAL, AND NEWCASTLE AND LONDON BRANCH COMMITTEES WHO HAVE DIED DURING TIME OF OFFICE.

NAME.	ADDRESS.	DATE OF DEATH.
	GENERAL.	
Edward Hooson........	Manchester......	December 11th, 1869.
Robert Allen	Oldham	April 2nd, 1877.
Richard Whittle	Crewe	March 6th, 1886.
Samuel Lever..........	Bacup	May 18th, 1888.
William P. Hemm	Nottingham	August 21st, 1889.
James Hilton..........	Oldham	January 18th, 1890.
Samuel Taylor	Bolton	December 15th, 1891.
J. T. W. Mitchell	Rochdale........	March 16th, 1895.
E. Hibbert	Failsworth	June 25th, 1895.
James Lownds	Ashton-un-Lyne. .	July 27th, 1895.
	NEWCASTLE.	
J. Atkinson............	Wallsend........	May 25th, 1890.
William Green	Durham	September 9th, 1891.
John Thirlaway........	Gateshead	May 1st, 1892.
	LONDON.	
J. J. B. Beach	Colchester	December 21st, 1888.

CO-OPERATIVE CONGRESSES.

No.	Year.	Date of Opening.	Where Held.	First Day. Inaugural Address delivered by	Second Day.	Third Day.
1	1869	May 31	London: Society of Arts, John Street, Adelphi.	T. Hughes, M.P.	A. J. Mundella, M.P.	W. Morrison, M.P.
2	1870	June 6	Manchester: Memorial Hall	W. Morrison, M.P.	Rev. W. N. Molesworth, M.A.	J. T. Hibbert, M.P.
3	1871	April 10	Birmingham: Midland Institute	Hon. Auberon Herbert, M.P.	C. Cattell	W. Morrison, M.P.
4	1872	,, 1	Bolton: Co-operative Hall	T. Hughes, M.P.	E. V. Neale	W. Morrison, M.P.
5	1873	,, 12	Newcastle: Mechanics' Institute	Joseph Cowen, jun.	W. Morrison, M.P.	T. Hughes, M.P.
6	1874	,, 6	Halifax: Mechanics' Hall	Thomas Brassey, M.P.	W. Morrison	W. Morrison.
7	1875	Mar. 29	London: Co-operative Institute	Professor T. Rogers	T. Hughes, Q.C.	W. Morrison.
8	1876	April 17	Glasgow: Assembly Rooms, 138, Bath Street	*Professor Caird Professor Hodgson	G. Anderson, M.P.	Baillie Collins.
9	1877	,, 2	Leicester: Museum Hall	Hon. Auberon Herbert.	Lloyd Jones	Abraham Greenwood.
10	1878	,, 22	Manchester: Co-operative Hall, Downing Street.	Marquis of Ripon	Bishop of Manchester	Dr. John Watts.
11	1879	,, 14	Gloucester: Corn Exchange	Professor Stuart	J. T. W. Mitchell	James Crabtree.
12	1880	May 17	Newcastle-on-Tyne: Bath Lane School-room.	Bishop of Durham	R. S. Watson	H. R. Bailey.
13	1881	June 6	Leeds: Albert Hall	Lord Derby	T. Hughes, Q.C.	James Crabtree.
14	1882	May 29	Oxford: Town Hall	Lord Reay	Councillor Pumphrey	George Hines.
15	1883	,, 14	Edinburgh: Oddfellows' Hall	Rt. Hon. W. E. Baxter, M.P.	William Maxwell	J. Allan.

CO-OPERATIVE CONGRESSES—*continued.*

No.	Year.	Date of Opening.	Where Held.	First Day. Inaugural Address delivered by	Second Day.	Third Day.
16	1884	June 2	Derby: Lecture Hall, Wardwick	Sedley Taylor	A. Scotton	Councillor Hartley, Lincoln.
17	1885	May 25	Oldham: Co-operative Hall, King Street.	Lloyd Jones	F. Hardern	Lewis Feber.
18	1886	June 14	Plymouth: Guildhall	Earl of Morley	A. H. D. Acland, M.P.	J. H. Young.
19	1887	May 30	Carlisle: Her Majesty's Theatre	G. J. Holyoake	Sir W. Lawson, M.P.	Councillor Rule.
20	1888	,, 21	Dewsbury: Industrial Hall	E. V. Neale	Marquis of Ripon	Jno. Cave, jun.
21	1889	June 20	Ipswich: Public Hall	Professor A. Marshall.	B. Jones	George Hines.
22	1890	May 26	Glasgow: City Hall	Earl of Rosebery	William Maxwell	James Deans.
23	1891	,, 18	Lincoln: Drill Hall, Broadgate	A. H. D. Acland, M.P.	D. M'Innes	J. Hepworth.
24	1892	June 6	Rochdale: Baillie Street Chapel	J. T. W. Mitchell	A. Greenwood	Councillor Cheetham.
25	1893	May 22	Bristol: Hall of the Y.M.C.A.	Councillor G. Hawkins.	J. Clay, J.P.	W. H. Brown, C.C.
26	1894	,, 14	Sunderland: Victoria Hall	T. Tweddell, J.P., F.R.G.S.	J. M'Kendrick	W. Crooks.
27	1895	June 3	Huddersfield	Geo. Thomson	Councillor T. Bland, J.P.	Jas. Broadbent.
28	1896	May 25	Woolwich: Tabernacle, Beresford Street.	†Earl of Winchilsea	†A. Williams	†G. Hawkins.

* Professor Caird presided at this Congress; the inaugural address was delivered by Professor Hodgson. In all other cases the chairman for the day delivered the inaugural address. † B. Jones presided each day.

MEETINGS AND OTHER COMING EVENTS

IN CONNECTION WITH THE SOCIETY IN 1897.

Jan. 30—Saturday....Nomination Lists: Last day for receiving.

Mar. 2—Tuesday ....Voting Lists: Last day for receiving.

,, 6—Saturday....Newcastle and London Branch and Divisional Quarterly Meetings.

,, 13—Saturday....General Quarterly Meeting—Manchester.

,, 27—Saturday....Quarter Day.

May 1—Saturday....Nomination Lists: Last day for receiving.

June 1—Tuesday ....Voting Lists: Last day for receiving.

,, 5—Saturday....Newcastle and London Branch and Divisional Quarterly Meetings.

,, 12—Saturday....General Quarterly Meeting—Manchester.

,, 26—Saturday....Quarter Day.

July 31—Saturday....Nomination Lists: Last day for receiving.

Aug. 31—Tuesday ....Voting Lists: Last day for receiving.

Sept. 4—Saturday....Newcastle and London Branch and Divisional Quarterly Meetings.

,, 11—Saturday....General Quarterly Meeting—Manchester.

,, 25—Saturday....Quarter Day.

Oct. 30—Saturday....Nomination Lists: Last day for receiving.

Nov. 30—Tuesday ....Voting Lists: Last day for receiving.

Dec. 4—Saturday....Newcastle and London Branch and Divisional Quarterly Meetings.

,, 11—Saturday....General Quarterly Meeting—Manchester.

,, 25—Saturday....Quarter Day.

STATISTICS

SHOWING THE PROGRESS

OF THE

CO-OPERATIVE WHOLESALE SOCIETY

LIMITED,

FROM COMMENCEMENT IN

1864 TO 1895.

PROGRESS FROM COMMENCEMENT, IN

Year ending	£5 Shares taken up.	No. of Members belonging to our Shareholders.	Capital.						Net Sales.
			Shares.	Loans and Deposits.	Trade and Bank Reserve Fund.	Insurance Fund.	Reserved Balances.	Total.	
			£	£	£	£	£	£	£
October, 1864 (30 weeks) ..	..	18,337	2,455	Included in Shares.	..	..	..	2,455	51,857
„ 1865	..	24,005	7,182		..	..	..	7,182	120,754
„ 1866	..	31,030	10,968		82	..	..	11,050	175,489
January, 1868 (65 weeks) ..	..	59,349	11,276	14,355	682	..	..	26,313	331,744
„ 1869	..	74,737	14,888	16,059	1,115	..	..	32,062	412,240
„ 1870	..	79,245	16,556	22,822	1,280	..	..	40,658	507,217
„ 1871 (53 weeks) ..	..	89,880	19,015	22,323	2,826	..	..	44,164	677,734
„ 1872	5,835	114,588	24,410	25,768	1,910	..	..	52,088	758,764
„ 1873	6,949	134,276	31,352	112,589	2,916	..	..	146,857	1,153,132
„ 1874	13,899	168,985	48,126	147,949	1,613	2,356	..	200,044	1,636,950
„ 1875	17,326	198,608	60,930	193,594	5,373	3,385	..	263,282	1,964,829
„ 1876	22,254	249,516	78,249	286,614	8,910	5,834	..	379,607	2,247,395
„ 1877 (53 weeks) ..	24,717	276,522	94,590	299,287	12,631	10,843	634	417,985	2,697,366
„ 1878	24,979	274,649	103,091	287,536	14,554	12,556	788	418,525	2,827,052
„ 1879	28,206	305,161	117,657	291,939	16,245	15,127	1,146	442,114	2,705,625
December, 1879 (50 weeks) ..	30,688	331,625	130,615	321,670	25,240	15,710	1,095	494,330	2,645,331
„ 1880	33,663	361,523	146,061	361,805	38,422	17,905	1,661	565,854	3,339,681
„ 1881	34,351	367,973	156,052	386,824	16,037	18,644	2,489	580,046	3,574,095
„ 1882	38,643	404,006	171,940	416,832	20,757	19,729	2,945	632,203	4,038,238
„ 1883	41,783	433,151	186,692	455,879	20,447	21,949	6,214	691,181	4,546,889
„ 1884 (53 weeks) ..	45,099	459,734	207,080	494,840	25,126	24,324	9,988	761,358	4,675,371
„ 1885	51,099	507,772	234,112	524,781	31,094	40,084	11,104	841,175	4,793,151
„ 1886	58,612	558,104	270,679	567,527	37,755	57,015	11,403	944,379	5,223,135
„ 1887	64,475	604,800	300,953	590,091	39,095	73,237	13,666	1,017,042	5,713,279
„ 1888	67,704	634,196	318,583	648,134	51,189	84,201	13,928	1,116,035	6,200,074
„ 1889 (53 weeks) ..	72,399	679,336	342,218	722,321	58,358	119,541	9,197	1,251,635	7,028,944
„ 1890	92,572	721,316	434,017	824,974	48,549	155,231	11,695	1,474,466	7,429,073
„ 1891	100,022	751,269	473,956	900,752	53,165	193,115	15,409	1,636,397	8,766,430
„ 1892	112,339	824,149	523,512	925,471	56,301	218,534	17,827	1,741,645	9,300,904
„ 1893	121,555	873,698	570,149	917,482	35,813	240,884	14,973	1,779,301	9,526,167
„ 1894	127,211	910,104	598,496	972,586	37,556	259,976	22,488	1,891,102	9,443,938
„ 1895 (53 weeks) ..	132,639	930,985	635,541	1,092,070	64,354	282,563	19,050	2,093,578	10,141,917
	..	..	..	..	..	..	..	..	124,654,765

Dr. RESERVE FUND ACCOUNT—TRADE DEPARTMENT

	£
Additions to Reserve Fund—	
From Disposal of Profit Account, as above—Net......................	142,443
Bonus to Employés: Balances between Amounts Provided and actually Paid	311
Dividend on Bad Debts, previously written off......................	737
Unclaimed Shares, Loans, and Cash	144
Profit on Sale of Strawberry Estate, Newcastle	1,953
„ „ Land, Liverpool	713
„ „ Land and Buildings, Rosedale	11
„ „ „ „ South Shields	96
„ „ „ „ Newhall	418
Interest on Manchester Ship Canal Shares	1,515
Dividend on Sales to Employés	403
	£148,744

MARCH, 1864, TO DECEMBER, 1895.

Comparison with corresponding period previous year. Increase.	Rate.	Distributive Expenses. Amount.	Rate on Sales Per £.	Per £100. s.	d.	Net Profit.	Average Dividend paid per £.	Additions to Trade. Reserve Fund.	Insuran'e Fund.	Dates Departments and Branches were commenced.
£		£		s.	d.	£	d.	£	£	
..	..	347	1¾	13	4½	267	1½	..	..	
..	..	906	1¾	15	0	1,858	3½	..	..	
54,735	45¼	1,615	2⅛	18	4¾	2,310	3	234	..	Tipperary.
112,688	51⅜	3,135	2¼	18	10¾	4,411	3	450	..	
124,063	43	3,338	1⅞	16	2¼	4,862	2¾	416	..	Kilmallock.
94,977	23	4,644	2⅛	18	3⅝	4,248	1¾	542	..	Limerick.
159,379	30¾	5,583	1⅞	16	5⅝	7,626	2¼	1,620	..	
86,559	12⅞	6,853	2⅛	18	0¾	7,867	2¼	1,020	..	Newcastle.
394,368	51⅞	12,811	2⅝	22	2⅝	11,116	2¼	1,243	..	Manchester Boot and Shoe, Crumpsall.
483,818	41⅞	21,147	3	25	10	14,233	2	922	..	Armagh, Manchester Drapery, Leicester, Hartford, Waterford, Clonmel.
327,879	20	28,436	3⅜	28	11¼	20,684	2	4,461	..	London, Tralee, Durham.
282,566	14⅜	31,555	3⅜	28	0⅞	26,750	2⅜	4,826	..	Liverpool.
401,095	17½	42,436	3¾	31	5½	36,979	2⅜	4,925	..	New York, Goole, Furnishing. S.S. "Plover" purchased. Cork.
188,897	7⅛	43,169	3⅝	30	6⅜	29,189	2	579	..	
121,427*	4⅝*	43,093	3¾	31	10¼	34,959	2⅛	5,970	..	
22,774	0⅞	41,309	3¾	31	2¾	42,764	2¾	8,060	..	Launch of Steamship "Pioneer." Rouen. Goole forwarding depôt.
611,282	22⅜	47,153	3⅜	28	2¾	42,090	2⅜	10,651	..	Heckmondwike.
234,414	7	51,306	3⅜	28	8½	46,850	2⅝	7,672	..	Copenhagen. Purchase of S.S. "Cambrian."
464,143	12⅞	57,340	3⅜	28	4¾	49,658	2⅝	3,416	..	Tea and Coffee Department, London.
503,651	12½	66,057	3⅜	29	0⅝	47,885	2⅝	3,176	..	Purchase of S.S. "Unity."
41,042	0⅞	70,343	3½	30	1	54,491	2¾	6,431	..	Hamburg. Bristol Depôt. Launch of S.S. "Progress."
203,946	4⅜	74,305	3⅝	31	0	77,630	3⅜	4,454	13,259	
430,028	8⅞	81,653	3¾	31	3⅜	83,328	3⅕	7,077	15,469	Longton Depôt. Launch of S.S. Federation.
490,056	9⅜	93,979	3⅞	32	10¾	65,141	2½	9,408	2,778	Batley, Heckmondwike Currying.
486,839	8½	105,027	4	33	10½	82,490	2⅞	8,684	6,614	London Cocoa Department. Launch of S.S. "Equity." Batley Ready-mades.
709,638	11⅛	117,849	4	33	6⅜	101,984	3⅛	2,249	16,658	
532,750	7⅝	126,879	4	34	1⅞	126,979	3½	..	20,982	Launch of S.S. "Liberty." Leeds Ready-mades Department.
1,337,357	18	143,151	3⅞	32	7⅞	135,008	3½	1,145	14,702	Dunston, Aarhus, Leicester New Works.
534,474	6	165,737	4¼	35	7⅝	98,532	2½	6,511	1,000	Broughton Cabinet Works.
225,263	2⅜	179,910	4⅛	37	9¼	84,156	2½	†17,215	7,659	
82,229*	0¾*	183,058	4⅝	39	4¾	126,192	2¾	26,092	..	Montreal.
516,365	5¼	199,512	4⅝	39	4⅛	192,766	3¾	27,424	10,000	Printing, Gothenburg, Irlam.
..	..	2,056,636	3⅞	32	11⅞	1,665,303	2⅝	‡142,443	‡109,121	

* Decrease. † From. ‡ From Disposal of Profit Account.

FROM COMMENCEMENT OF SOCIETY. CR.

Deductions from Reserve Fund—

	£
Celebration Dinner: Opening Warehouse, Balloon Street	56
Land and Buildings Account Depreciation, Special	1,148
Fixtures " " "	852
Newcastle Formation Expenses	16
Insurance Fund	6,000
Investments Written off: Bank Department	18,259
" " Trade Department	10,660
Manchester Ship Canal Shares	20,000
Donations, Subscriptions, &c.	28,998
21st Anniversary Commemoration Expenses, Manchester	2,017
	88,006
BALANCE—Reserve Fund:—December 28th, 1895, as per Capital Account £53,951	
" " as per proposed Disposal of Profit Account. 6,787—	60,738
	£148,744

MANCHESTER GROCERY AND PROVISION TRADE.

Since commencing to keep a separate Account.

IN YEARS TO 1890; IN QUARTERS SINCE 1890.

YEAR OR QUARTER ENDED.	Sales.	EXPENSES.			NET PROFIT.			Stocks at end.
		Amount.	Rate.		Amount.	Rate.		
Year ended:—	£	£	s.	d.	£	s.	d.	£
January, 1875 (3 quarters) ..	1110155	11716	0	2½	11986	0	2½	71360
„ 1876	1476536	14701	0	2⅜	19042	0	3	56437
„ 1877 (53 weeks)	1707637	17692	0	2⅜	27993	0	3⅞	68205
„ 1878	1761017	16366	0	2¼	25745	0	3½	53790
„ 1879	1683613	17373	0	2⅜	26502	0	3¾	55319
December, 1879 (50 weeks)	1590007	16761	0	2½	28826	0	4¼	71446
„ . 1880	1998384	18911	0	2¼	30977	0	3⅝	70091
„ 1881	2047210	19883	0	2¼	32460	0	3¾	87277
„ 1882	2298350	23666	0	2⅜	30644	0	3⅛	141191
„ 1883	2544409	28337	0	2⅝	27455	0	2½	109414
„ 1884 (53 weeks)	2457288	28522	0	2¾	24893	0	2⅜	107524
„ 1885	2375945	27484	0	2¾	41757	0	4⅛	92790
„ 1886	2571435	29777	0	2¾	41381	0	3¾	113620
„ 1887	2827624	32979	0	2¾	45516	0	3¾	129565
„ 1888	3092225	35914	0	2¾	49798	0	3¾	139849
„ 1889 (53 weeks)	3503195	39805	0	2⅝	61452	0	4⅛	112395
„ 1890	3517114	41548	0	2¾	65984	0	4½	123432
Quarter ended:—								
March, 1891	946982	10971	0	2¾	19441	0	4⅞	101661
June, „	936125	11039	0	2¾	16001	0	4	99479
September, „	1057205	11427	0	2½	19517	0	4⅜	145406
December, „	1172257	13183	0	2⅝	19923	0	4	192161
March, 1892	1034457	12992	0	3	15722	0	3⅝	184174
June, „	1029284	13727	0	3⅛	13622	0	3⅛	154057
September, „	1108358	13560	0	2⅞	11385	0	2⅜	197236
December, „	1228901	14861	0	2⅞	19186	0	3⅝	226266
March, 1893	1047841	14258	0	3¼	19539	0	4⅜	177536
June, „	1076495	14203	0	3⅛	16895	0	3¾	179585
September, „	1212846	14449	0	2¾	173	..		162545
December, „	1208866	14971	0	2⅞	11409	0	2¼	135325
March, 1894	1037329	14160	0	3¼	14431	0	3¼	112569
June, „	1041902	14396	0	3¼	14409	0	3¼	105402
September, „	1086623	14318	0	3⅛	16358	0	3½	132204
December, „	1180273	15111	0	3	17722	0	3½	144705
March, 1895	1026850	14600	0	3⅜	25547	0	5⅞	119255
June, „	1023423	14895	0	3⅜	20763	0	4¾	118877
September, „ (14 weeks)....	1237877	16234	0	3⅛	21308	0	4⅛	179163
December, „	1262567	15907	0	3	26465	0	5	159930
March, 1896	1164938	15884	0	3¼	24751	0	5	141996
June, „	1114976	15834	0	3⅜	13396	0	2⅞	133875
	62798519	732915	0	2¾	970374	0	3⅝	..

MANCHESTER DRAPERY TRADE.

Since commencing to keep a separate Account.

IN YEARS TO 1890; IN QUARTERS SINCE 1890.

Year or Quarter ended.	Sales.	Expenses.		Net Profit.		Net Loss.		Stocks at end.
		Amount	Rate.	Amount	Rate.	Amount	Rate.	
Year ended:—	£	£	s. d.	£	s. d.	£	s. d.	£
January, 1874 (1 quarter)	10575	348	0 8	201	0 $4\frac{9}{16}$	..	..	11568
" 1875	71290	3872	1 1	1244	0 $4\frac{1}{8}$	..	..	36824
" 1876	129486	7264	1 $1\frac{1}{2}$	720	0 $1\frac{1}{4}$	..	..	72408
" 1877 (53 weeks)	147083	9391	1 $3\frac{3}{8}$	..	..	1420	0 $2\frac{1}{4}$	69267
" 1878	124918	8879	1 $5\frac{1}{2}$	..	..	4144	0 $7\frac{7}{8}$	48511
" 1879	134746	8518	1 $3\frac{1}{8}$	635	0 $1\frac{1}{8}$	..	..	44439
December, 1879 (50 weeks)	126824	7817	1 $2\frac{3}{4}$	1674	0 $3\frac{1}{8}$	..	..	43225
" 1880	139421	8511	1 $2\frac{5}{8}$	2314	0 4	..	..	44105
" 1881	132914	8168	1 $2\frac{3}{4}$	1932	0 $3\frac{1}{2}$	..	..	42203
" 1882	143019	8337	1 $1\frac{7}{8}$	3504	0 $5\frac{7}{8}$	..	..	40854
" 1883	156997	8976	1 $1\frac{5}{8}$	4171	0 $6\frac{3}{8}$	..	..	41365
" 1884 (53 weeks)	165770	8365	1 0	5283	0 $7\frac{5}{8}$	..	..	38026
" 1885	173233	9067	1 $0\frac{1}{2}$	5387	0 $7\frac{3}{8}$	..	..	44948
, 1886	195139	9728	0 $11\frac{7}{8}$	5333	0 $6\frac{1}{2}$	..	..	54130
" 1887	210705	10798	1 $0\frac{1}{4}$	3624	0 $4\frac{1}{8}$	..	..	59695
" 1888	232277	11350	0 $11\frac{5}{8}$	4791	0 $4\frac{7}{8}$	..	..	62110
" 1889 (53 weeks)	256449	13168	1 $0\frac{1}{4}$	4539	0 $4\frac{1}{8}$	..	..	87849
" 1890	311365	15612	1 0	6991	0 $5\frac{3}{8}$	..	..	84739
Quarter ended:—								
March, 1891	84398	3901	0 11	868	0 $2\frac{3}{8}$	..	..	81873
June, "	77664	4013	1 $0\frac{3}{8}$	3098	0 $9\frac{1}{2}$	..	..	83681
September, "	83583	4159	0 $11\frac{7}{8}$	1331	0 $3\frac{3}{4}$	..	..	87861
December, "	93568	4233	0 $10\frac{3}{4}$	2618	0 $6\frac{5}{8}$	..	..	82524
March, 1892	92107	4508	0 $11\frac{5}{8}$	2326	0 6	..	..	82022
June, "	86610	4717	1 1	2142	0 $5\frac{7}{8}$	..	..	87115
September, "	85643	4725	1 $1\frac{1}{8}$	2118	0 $5\frac{7}{8}$	..	..	97505
December, "	106135	4917	0 11	3550	0 8	..	..	90744
March, 1893	97708	4815	0 $11\frac{3}{4}$	2432	0 $5\frac{7}{8}$	..	..	92723
June, "	90894	4882	1 $0\frac{7}{8}$	2329	0 $6\frac{1}{8}$	..	..	91116
September, "	78956	4928	1 $2\frac{7}{8}$	13	..	..	..	101483
December, "	102208	5274	1 $0\frac{3}{8}$	3011	0 7	..	..	98217
March, 1894	99859	5227	1 $0\frac{1}{2}$	2153	0 $5\frac{1}{8}$	..	..	95910
June, "	93284	5451	1 2	1927	0 $4\frac{7}{8}$	..	..	94380
September, "	97192	5487	1 $1\frac{1}{2}$	1975	0 $4\frac{7}{8}$	..	..	104261
December, "	110478	5532	1 0	3976	0 $8\frac{5}{8}$	..	..	97297
March, 1895	103266	5485	1 $0\frac{5}{8}$	2889	0 $6\frac{5}{8}$	..	..	94987
June, "	105908	5745	1 1	4005	0 9	..	..	94074
September, " (14 weeks)	103096	6327	1 2	193	0 $0\frac{3}{8}$	..	..	104180
December, "	122890	6060	0 $11\frac{3}{4}$	5269	0 $10\frac{1}{4}$	..	..	108337
March, 1896	120344	6254	1 $0\frac{3}{8}$	2922	0 $5\frac{3}{4}$	..	..	106224
June, "	114333	6658	1 $1\frac{7}{8}$	3221	0 $6\frac{3}{4}$	..	..	105972
	5017335	271467	1 $0\frac{7}{8}$	106709	..	5564	..	..
Less Depreciation allowed, see Disposal of Profit Account, October, 1877			£4757	..	..			
" Loss			5564	10321	..			
Leaves Net Profit			..	96388	0 $4\frac{1}{2}$			

NOTE.—To December, 1883, the figures include Woollens and Ready-Mades Department.

MANCHESTER WOOLLENS AND READY-MADES DEPARTMENT.

Since publishing a separate Account in Balance Sheet.

IN YEARS TO 1890; IN QUARTERS SINCE 1890.

Year or Quarter ended.	Sales.	Expenses.		Net Profit.		Net Loss.		Stocks at end.
		Amount	Rate.	Amount	Rate.	Amount	Rate.	
Year ended :—		£	s. d.	£	s. d.	£	s. d.	
December, 1884 (53 weeks)	20368	1221	1 2⅜	409	0 4¾	..	..	4407
„ 1885	21210	1249	1 2⅛	336	0 3¾	..	..	5242
„ 1886	22173	1417	1 3¼	327	0 3½	..	..	6275
„ 1887	21820	1427	1 3⅝	..	..	2	..	6112
„ 1888	23047	1547	1 4	..	..	25	0 0¼	8450
„ 1889 (53 weeks)	26813	1845	1 4½	..	..	212	0 1⅞	12277
„ 1890	26693	2095	1 6¾	..	..	1284	0 11½	11463
Quarter ended :—								
March, 1891	7896	584	1 5⅝	..	..	805	2 0½	13614
June, „	8896	613	1 4½	9	0 0¼	..	..	13880
September, „	7126	609	1 8½	..	..	746	2 1	17718
December, „	8028	659	1 7⅝	..	..	752	1 10⅜	19761
March, 1892	9132	758	1 7⅞	..	..	623	1 4¼	20913
June, „	12597	828	1 3¾	311	0 5⅞	..	..	19944
September, „	7483	722	1 11⅛	..	..	4178	..	15501
December, „	11437	641	1 1⅜	297	0 6⅛	..	..	12958
March, 1893	12732	721	1 1½	182	0 3⅜	..	..	13362
June, „	14133	741	1 0½	358	0 6	..	..	10760
September, „	9969	746	1 0⅞	..	..	145	0 3⅜	13888
December, „	12685	759	1 2¼	87	0 1⅝	..	..	13166
March, 1894	14276	814	1 1⅝	..	..	18	0 0¼	14239
June, „	17681	818	0 11	857	0 11⅝	..	..	9403
September, „	11151	826	1 5¾	184	0 3⅞	..	..	13498
December, „	14520	911	1 3	..	..	332	0 5⅜	13655
March, 1895	17034	970	1 1⅝	210	0 2⅞	..	..	15189
June, „	23802	1035	0 10⅜	954	0 9½	..	..	11622
September, „ (14 weeks)	15600	1028	1 3¾	88	0 1¼	..	..	16168
December, „	19137	1122	1 2	830	0 10⅜	..	..	15608
March, 1896	24664	1218	0 11¾	323	0 3⅛	..	..	18666
June, „	29459	1201	0 9¾	1298	0 10½	..	..	14936
	471562	29125	1 2¾	7060	..	9122	..	..
Less Profit						7060	..	
Leaves Net Loss						2062	0 1	

NOTE.—To June 1895 inclusive, the figures include Broughton Clothing Factory, now separately stated in Productive Accounts.

MANCHESTER BOOT AND SHOE TRADE.

Since commencing to keep a separate Account.

IN YEARS TO 1890: IN QUARTERS SINCE 1890.

Year or Quarter ended.	Sales.	Expenses.		Net Profit.		Net Loss.		Stocks at end.
		Amount	Rate.	Amount	Rate.	Amount	Rate.	
Year ended:—	£	£	s. d.	£	s. d.	£	s. d.	£
January, 1874 (1 quarter)	5506	204	0 8¾	1	..	..	..	4715
„ 1875	37257	1129	0 7¼	748	0 4¾	..	..	5197
„ 1876	53885	1326	0 5⅞	775	0 3⅜	..	..	7711
„ 1877 (53 weeks)	57307	1811	0 7⅕	586	0 2⅜	..	..	6082
„ 1878	58304	1975	0 8⅕	786	0 3⅕	..	..	7935
„ 1879	59327	2192	0 8¾	767	0 3	..	..	10242
December, 1879 (50 weeks)	55270	2135	0 9¼	752	0 3¼	..	..	10964
„ 1880	62139	2387	0 9⅕	755	0 2⅕	..	..	11484
„ 1881	71382	2492	0 8⅗	842	0 2¾	..	..	11377
„ 1882	76101	2583	0 8⅕	1246	0 3⅜	..	..	12564
„ 1883	86056	2882	0 8	1261	0 3⅓	..	..	12938
„ 1884 (53 weeks)	99694	3150	0 7½	1586	0 3¾	..	..	16567
„ 1885	106755	3596	0 8	1395	0 3⅕	..	..	16074
„ 1886	121432	3772	0 7⅗	2767	0 5⅗	..	..	16578
„ 1887	126099	4070	0 7⅗	3083	0 5¾	..	..	19727
„ 1888	139188	4864	0 8⅗	2940	0 5	..	..	22680
„ 1889 (53 weeks)	163002	5491	0 8	3772	0 5⅓	..	..	24067
„ 1890	188530	5983	0 7½	4957	0 6¼	..	..	32095
Quarter ended:—								
March, 1891	56667	1780	0 7⅓	663	0 2¾	..	..	41852
June, „	59897	1842	0 7⅗	1628	0 6½	..	..	37391
September, „	50425	1757	0 8¼	1282	0 6	..	..	39962
December, „	51191	1815	0 8½	1385	0 6⅗	..	..	36875
March, 1892	56859	2238	0 9⅗	680	0 2¾	..	..	44703
June, „	73503	2523	0 8⅕	1286	0 4⅕	..	..	44749
September, „	49268	2237	0 10⅞	541	0 2⅗	..	..	52322
December, „	52457	2324	0 10⅜	537	0 2⅜	..	..	52169
March, 1893	58886	2502	0 10⅕	868	0 3⅓	..	..	60513
June, „	66922	2529	0 9	1078	0 3¾	..	..	59015
September, „	45530	2355	1 0⅜	378	0 1⅘	..	..	54570
December, „	51159	2533	0 11⅕	493	0 2¼	..	..	50864
March, 1894	59475	2753	0 11	451	0 1¾	..	..	60688
June, „	68977	2758	0 9⅓	1303	0 4⅓	..	..	60079
September, „	49635	2581	1 0⅗	368	0 1¾	..	..	58483
December, „	54474	2567	0 11¼	354	0 1½	..	..	56515
March, 1895	64234	2733	0 10⅕	835	0 3	..	..	58151
June, „	81333	2843	0 8⅗	1791	0 5⅓	..	..	52650
September, „ (14 weeks)	60915	2788	0 10⅗	1239	0 4⅗	..	..	55506
December „	62484	2573	0 9⅞	1797	0 6⅕	..	..	56302
March, 1896	73216	2854	0 9¼	2176	0 7⅕	..	..	66193
June, „	83108	2927	0 8⅗	2910	0 8⅕	..	..	59946
	2898859	105854	0 8¾	53062	0 4⅗	..	..	..

MANCHESTER FURNISHING TRADE.

Since commencing to keep a separate Account.

IN YEARS TO 1890; IN QUARTERS SINCE 1890.

YEAR OR QUARTER ENDED.	Sales.	EXPENSES.		NET PROFIT.		NET LOSS.		Stocks at end.
		Amount	Rate.	Amount	Rate.	Amount	Rate.	
Year ended:—	£	£	s. d.	£	s. d.	£	s. d.	£
January, 1877 (27 weeks)	5944	405	1 4⅜	..	..	52	0 2	2571
,, 1878	15464	984	1 3¼	65	0 1	..	..	2286
,, 1879	17374	1185	1 4¼	140	0 1⅞	..	..	2421
December, 1879 (50 weeks)	18361	1108	1 2⅜	60	0 0¾	..	..	3524
,, 1880	24243	1317	1 1	404	0 4	..	..	4307
,, 1881	24844	1293	1 0½	171	0 1⅝	..	..	3971
,, 1882	29021	1515	1 0½	219	0 1¾	..	..	3630
,, 1883	34804	1878	1 0⅞	423	0 2⅞	..	..	4274
,, 1884 (53 weeks)	44311	2253	1 0	673	0 3¾	..	..	5433
,, 1885	51238	2415	0 11¼	893	0 4⅛	..	..	5817
,, 1886	62340	2657	0 10¼	1129	0 4¼	..	..	6041
,, 1887	72932	3497	0 11½	946	0 3	..	..	9497
,, 1888	85484	4755	1 1¼	546	0 1½	..	..	8548
,, 1889 (53 weeks)	96163	4952	1 0¼	1436	0 3½	..	..	9770
,, 1890	122661	5389	0 10½	2351	0 4½	..	..	12930
Quarter ended:—								
March, 1891	32981	1500	0 10⅞	360	0 2½	..	..	13513
June, ,, ...	32471	1482	0 10⅞	399	0 2⅞	..	..	14285
September, ,, ...	33398	1466	0 10½	396	0 2¾	..	..	12812
December, ,, ...	38256	1545	0 9⅝	893	0 5½	..	..	12567
March, 1892	33409	1747	1 0½	..	..	26	0 0⅛	13557
June, ,, ...	37473	2036	1 1	296	0 1⅞	..	..	13883
September, ,, ...	31686	1866	1 2⅛	..	..	41	0 0¼	12592
December, ,, ...	40418	1910	0 11¼	90	0 0½	..	..	13455
March, 1893	35083	1902	1 1	9	..	..	..	15263
June, ,, ...	38061	1968	1 0⅜	91	0 0½	..	..	16252
September, ,, ...	31710	1960	1 2¾	6	..	..	..	15593
December, ,, ...	37674	2163	1 1¾	238	0 1½	..	..	17683
March, 1894	37572	2188	1 1⅞	..	..	37	0 0⅛	18184
June, ,, ...	40834	2277	1 1⅜	171	0 1	..	..	18078
September, ,, ...	40139	2319	1 1¾	295	0 1¾	..	..	18287
December, ,, ...	49176	2441	0 11⅞	992	0 4¾	..	..	21775
March, 1895	40945	2471	1 2⅜	..	..	95	0 0½	23380
Jure, ,, ...	47758	2529	1 0⅝	468	0 2¼	..	..	23109
September, ,, (14 weeks)	46622	2671	1 1⅝	723	0 3⅝	..	..	16664
December, ,, ...	56157	2689	0 11⅜	1359	0 5¾	..	..	19574
March, 1896	51743	2688	1 0⅜	802	0 3⅝	..	..	19369
June, ,, ...	56949	2742	0 11½	1218	0 5⅛	..	..	19985
	1595679	82163	1 0¼	18262	..	251	..	..
	Less Loss..............			251	..			
	Leaves Net Profit......			18011	0 2⅝			

NOTE.—From March quarter, 1893, to June quarter, 1895, inclusive, the results and Stocks include Broughton Cabinet Works.

NEWCASTLE BRANCH GROCERY AND PROVISION TRADE.

Since commencing to keep a separate Account.

IN YEARS TO 1890; IN QUARTERS SINCE 1890.

Year or Quarter ended.	Sales.	Expenses.			Net Profit.			Net Loss.			Stocks at end.
		Amount	Rate.		Amount	Rate.		Amount	Rate.		
Year ended:—	£	£	s.	d.	£	s.	d.	£	s.	d.	£
January, 1877 (53 weeks)	529244	7727	0	3½	4531	0	2	..		..	34591
„ 1878	541783	8213	0	3⅝	4139	0	1¾	..		..	28996
„ 1879	457597	7402	0	3⅞	3168	0	1⅝	..		..	22789
December, 1879 (50 weeks)	465108	6823	0	3½	7234	0	3⅝	..		..	49145
„ 1880	588664	7868	0	3⅛	4636	0	1⅞	..		..	44398
„ 1881	703337	8921	0	3	9296	0	3⅛	..		..	54648
„ 1882	795007	10098	0	3	8741	0	2⅝	..		..	65330
„ 1883	871597	10785	0	2⅞	10476	0	2⅞	..		..	55152
„ 1884 (53 weeks)	930803	11395	0	2⅞	12451	0	3⅛	..		..	65158
„ 1885	936542	12075	0	3	14422	0	3⅝	..		..	53546
„ 1886	949878	12321	0	3	18794	0	4⅝	..		..	71265
„ 1887	966148	14220	0	3½	11026	0	2⅝	..		..	59632
„ 1888	1027528	14125	0	3¼	19143	0	4⅜	..		..	65838
„ 1889 (53 weeks)	1100451	14947	0	3¼	18421	0	4	..		..	55671
„ 1890	1173876	15147	0	3	26496	0	5⅜	..		..	42136
Quarter ended:—											
March, 1891	305909	4063	0	3⅛	7047	0	5½	..		..	44873
June, „	336379	4125	0	2⅞	8605	0	6⅛	..		..	35243
September, „	377646	4234	0	2⅝	8594	0	5⅜	..		..	49564
December, „	411915	4522	0	2⅝	7234	0	4⅛	..		..	54737
March, 1892	373558	4570	0	2⅞	7644	0	4⅞	..		..	58340
June, „	343857	4566	0	3⅛	6817	0	4¾	..		..	54424
September, „	404503	4713	0	2¾	11377	0	6¾	..		..	50504
December, „	442203	5137	0	2¾	11232	0	6	..		..	60431
March, 1893	372336	5685	0	3⅝	9233	0	5⅞	..		..	52253
June, „	377646	5378	0	3⅜	8323	0	5¼	..		..	52913
September, „	404646	5378	0	3⅛	5087	0	3	..		..	57550
December, „	434726	5904	0	3¼	7356	0	4	..		..	57932
March, 1894	366593	5524	0	3½	4648	0	3	..		..	54983
June, „	366300	5474	0	3½	6278	0	4	..		..	42221
September, „	370457	5506	0	3½	8903	0	5¾	..		..	51679
December, „	417788	5784	0	3¼	5002	0	2¾	..		..	48910
March, 1895	366270	5609	0	3⅝	6899	0	4½	..		..	45779
June, „	396302	5813	0	3½	7440	0	4½	..		..	42263
September, „ (14 weeks)	438437	6161	0	3¼	8730	0	4¾	..		..	57142
December, „	454002	5995	0	3⅛	9262	0	4⅞	..		..	46719
March, 1896	418791	6141	0	3½	10067	0	5¾	..		..	55506
June, „	418527	6032	0	3¾	6555	0	3¾	..		..	47185
	20636354	278381	0	3⅛	345307	0	4	..		..	..

NEWCASTLE BRANCH DRAPERY TRADE.

Since commencing to keep a separate Account.

IN YEARS TO 1890; IN QUARTERS SINCE 1890.

Year or Quarter ended.		Sales.	Expenses.		Net Profit.		Stocks at end.
			Amount.	Rate.	Amount.	Rate.	
Year ended:—		£	£	s. d.	£	s. d.	£
January,	1877 (53 weeks)	39896	1728	0 10⅜	796	0 4¾	11525
„	1878	49559	2211	0 10⅝	999	0 4¾	11635
„	1879	44161	2159	0 11⅝	612	0 3¼	10463
December,	1879 (50 weeks)	44674	2153	0 11½	871	0 4⅝	11590
„	1880	55979	2494	0 10⅝	2206	0 9½	16171
„	1881	69081	2656	0 9⅛	2339	0 8⅛	16075
	1882	84457	2975	0 8⅜	3656	0 10⅜	15754
„	1883	99354	3387	0 8⅛	4499	0 10¾	16594
„	1884 (53 weeks)	118345	3983	0 8	4503	0 9⅛	18906
„	1885	142701	4598	0 7⅝	6906	0 11½	24084
„	1886	152433	5342	0 8⅜	7562	0 11⅞	28645
„	1887	144713	5868	0 9⅝	5845	0 9⅝	25537
„	1888	161974	5973	0 8¾	6373	0 9⅜	30177
„	1889 (53 weeks)	185443	6515	0 8⅜	7600	0 9¾	32799
„	1890	232360	6850	0 7	10588	0 10⅞	33216
Quarter ended:—							
March,	1891	64660	1861	0 6⅞	3102	0 11½	35463
June,	„	61882	1848	0 7⅛	3255	1 0½	34561
September,	„	56368	1833	0 7¾	2111	0 8⅞	38584
December,	„	68556	1958	0 6¾	2418	0 8⅜	35964
March,	1892	56448	1956	0 8¼	1949	0 8¼	42429
June,	„	50808	1841	0 8⅝	2019	0 9½	31215
September,	„	59924	1866	0 7⅜	3015	1 0	34938
December,	„	73823	2133	0 6⅞	2748	0 8⅞	36570
March,	1893	61141	2220	0 8⅝	2026	0 10⅝	43565
June,	„	66823	2469	0 8¾	2963	0 7⅞	38860
September,	„	58113	2351	0 9⅝	2070	0 8½	45957
December,	„	73880	2533	0 8⅛	2770	0 8⅞	40770
March,	1894	70916	2433	0 8⅛	2826	0 9½	37927
June,	„	74709	2405	0 7⅝	3279	0 10½	35508
September,	„	65897	2342	0 8½	2808	0 10⅛	45042
December,	„	82408	2550	0 7⅜	3728	0 10¾	40826
March,	1895	67954	2471	0 8⅝	2473	0 8⅝	45238
June,	„	83208	2527	0 7¼	4360	1 0½	36154
September,	„ (14 weeks)	70999	2550	0 8½	3184	0 10¾	43772
December	„	83287	2537	0 7¼	4152	0 11⅞	48361
March,	1896	78185	2715	0 8¼	2822	0 8⅝	54261
June,	„	88553	2639	0 7⅛	4681	1 0⅝	45377
		3143672	108930	0 8¼	130114	0 9⅞	..

NEWCASTLE BRANCH BOOT AND SHOE TRADE.

Since commencing to keep a separate Account.

IN YEARS TO 1890; IN QUARTERS SINCE 1890.

Year or Quarter ended.	Sales.	Expenses.		Net Profit.		Loss.		Stocks at end.
		Amount	Rate.	Amount	Rate.	Amount	Rate.	
Year ended:—	£	£	s. d.	£	s. d.	£	s. d.	£
January, 1877 (53 weeks)	25379	649	0 6⅛	406	0 3¾	..	..	1505
„ 1878..........	28425	760	0 6⅜	690	0 5¾	..	..	2242
„ 1879..........	28375	880	0 7⅜	310	0 2⅝	..	..	3179
December, 1879 (50 weeks)	27708	935	0 8	357	0 3	..	..	4681
„ 1880..........	34968	1276	0 8¾	649	0 4⅜	..	..	5971
„ 1881..........	42991	1307	0 7¼	938	0 5¼	..	..	4645
„ 1882..........	54487	1527	0 6⅝	1336	0 5⅞	..	..	6561
„ 1883..........	65501	1955	0 7⅛	1890	0 6⅞	..	..	5817
„ 1884 (53 weeks)	75054	2408	0 7⅝	1917	0 6⅛	..	..	8266
„ 1885..........	89117	2783	0 7⅜	2195	0 5⅞	..	..	11319
„ 1886..........	97148	3646	0 9	1619	0 4	..	..	13442
„ 1887..........	91029	3929	0 10¼	1173	0 3	..	..	13974
„ 1888..........	101272	3978	0 9⅜	1547	0 3⅝	..	..	14483
„ 1889 (53 weeks)	90528	3570	0 9⅜	1236	0 3¼	..	..	12463
„ 1890..........	113149	3753	0 7⅞	2299	0 4⅞	..	..	11870
Quarter ended:—								
March, 1891..........	32032	957	0 7⅛	591	0 4⅜	..	..	14834
June, „	33249	983	0 7	887	0 6⅜	..	..	15129
September, „	31857	981	0 7⅜	784	0 5⅞	..	..	14706
December, „	27569	950	0 8¼	865	0 7½	..	..	12628
March, 1892..........	28781	987	0 8⅛	..	..	6	..	14524
June, „	29330	990	0 8	651	0 5¼	..	..	15712
September, „	33516	1006	0 7⅛	1046	0 7⅜	..	..	17056
December „	33857	1081	0 7⅝	940	0 6⅝	..	..	15567
March, 1893..........	33312	1273	0 9⅛	436	0 3⅛	..	..	21670
June, „	33339	1217	0 8¾	574	0 4⅛	..	..	26127
September, „	28399	1182	0 9⅞	552	0 4⅝	..	..	22419
December, „	32429	1221	0 9	594	0 4⅜	..	..	18139
March, 1894..........	32180	1166	0 8⅝	592	0 4⅜	..	..	17184
June, „	34624	1187	0 8⅛	472	0 3¼	..	..	17558
September, „	32421	1134	0 8⅜	638	0 4⅝	..	..	19059
December, „	32189	1214	0 9	543	0 4	..	..	17770
March, 1895..........	29370	1172	0 9½	290	0 2¼	..	..	19041
June, „	39716	1271	0 7⅝	860	0 5⅛	..	..	18604
September, „ (14 weeks)	33923	1212	0 8½	1345	0 9½	..	..	22122
December, „	36744	1259	0 8⅛	1366	0 8⅞	..	..	20680
March, 1896..........	34451	1229	0 8½	673	0 4⅝	..	..	21558
June, „	36535	1165	0 7⅝	959	0 6¼	..	..	21758
	1684954	58193	0 8¼	34220	..	6	..	..
	Less Loss..............			6	..			
	Leaves Net Profit......			34214	0 4¾			

Note.—To December, 1888, the figures include Furnishing Department.

NEWCASTLE BRANCH FURNISHING TRADE.

Since commencing to keep a separate Account.

IN YEARS TO 1890; IN QUARTERS SINCE 1890.

Year or Quarter ended.	Sales.	Expenses.		Net Profit.		Net Loss.		Stocks at end.
		Amount	Rate.	Amount	Rate.	Amount	Rate.	
Year ended :—	£	£	s. d.	£	s. d.	£	s. d.	£
December, 1889 (53 weeks)	49078	2736	1 1⅜	..	..	112	0 0½	6636
„ 1890..........	89409	3551	0 9½	2499	0 6⅝	..	..	10474
Quarter ended :—								
March, 1891..........	22761	967	0 10⅛	260	0 2⅝	..	..	11415
June, „	28616	1077	0 9	1020	0 8½	..	..	12518
September, „	21526	1038	0 11½	278	0 3	..	..	12367
December, „	26338	1138	0 10¼	620	0 5⅝	..	..	12002
March, 1892..........	18068	1020	1 1½	..	..	51	0 0⅝	12184
June, „	16604	996	1 2⅜	150	0 2⅛	..	..	11854
September, „	20914	1011	0 11½	386	0 4⅜	..	..	10787
December, „	26379	1160	0 10½	739	0 6⅝	..	..	11833
March, 1893..........	17382	1172	1 4⅛	..	..	225	0 3	12515
June, „	23182	1481	1 3¼	340	0 3½	..	..	12964
September, „	18962	1397	1 5⅝	..	..	150	0 1⅞	13285
December, „	27397	1617	1 2⅛	190	0 1⅝	..	..	13261
March, 1894..........	22279	1407	1 3⅛	562	0 6	..	..	13560
June, „	28800	1598	1 1¼	639	0 5¼	..	..	13782
September, „	23335	1459	1 3	..	..	50	0 0½	13190
December, „	31931	1642	1 0¼	454	0 3⅜	..	..	13377
March, 1895..........	21003	1511	1 5¼	..	..	301	0 3⅜	14896
June, „	30574	1682	1 1⅛	616	0 4¾	..	..	14474
September, „ (14 weeks)	27566	1663	1 2⅜	370	0 3⅛	..	..	14956
December, „	32290	1671	1 0⅜	286	0 2¾	..	..	16120
March, 1896..........	27152	1731	1 3¼	491	0 4¼	..	..	17407
June, „	33866	1735	1 0¼	943	0 6⅝	..	..	17884
	685412	36460	1 0¾	10943	..	889	..	..
	Less Loss...........			889	..			
	Leaves Net Profit....			10054	0 3½			

LONDON BRANCH GROCERY TRADE.

Since commencing to keep a separate Account.

IN YEARS TO 1890; IN QUARTERS SINCE 1890.

YEAR OR QUARTER ENDED.		Sales.	EXPENSES.		NET PROFIT.		Stocks at end.
			Amount.	Rate.	Amount.	Rate.	
Year ended :—		£	£	s. d.	£	s. d.	£
January,	1875 (3 quarters)..	72385	1542	0 5⅛	567	0 1⅞	7315
„	1876	130752	2365	0 4⅜	1584	0 2⅞	7219
„	1877 (53 weeks) ..	184879	3026	0 3⅞	4182	0 5⅜	12668
„	1878	210415	3283	0 3¾	2320	0 2⅝	10511
„	1879	216314	3381	0 3¾	2388	0 2⅝	8489
December,	1879 (50 weeks) ..	232660	3570	0 3⅝	5239	0 5⅜	13594
„	1880	274965	4066	0 3½	3559	0 3⅛	20789
„	1881	289748	5310	0 4⅜	2149	0 1¾	7394
„	1882	296767	5001	0 4	3776	0 3	10636
„	1883	337753	5441	0 3⅞	4630	0 3¼	13282
„	1884 (53 weeks) ..	375963	6233	0 4	5062	0 3¼	13869
„	1885	445876	7485	0 4	9101	0 4⅞	24256
„	1886	527904	8463	0 3¾	9719	0 4⅜	24739
„	1887	652882	11336	0 4⅛	8839	0 3¼	47319
„	1888	739279	14028	0 4½	9377	0 3	41562
„	1889 (53 weeks) ..	848378	15176	0 4¼	10667	0 3	44017
„	1890	893470	17020	0 4½	12668	0 3⅜	57347
Quarter ended :—							
March,	1891	245815	4956	0 4¾	3153	0 3	49228
June,	„	256359	5078	0 4¾	3163	0 2⅞	46274
September,	„	287105	5084	0 4⅛	1517	0 1¼	56994
December,	„	333519	5792	0 4⅛	3605	0 2½	75578
March,	1892	281030	5827	0 4⅞	4927	0 4⅛	64499
June,	„	285441	5827	0 4⅞	1789	0 1½	49482
September,	„	302238	5825	0 4⅝	2251	0 1¾	60193
December,	„	337740	6311	0 4⅜	4566	0 3⅛	73398
March,	1893	281578	5990	0 5	4625	0 3⅞	63075
June,	„	286482	6132	0 5⅛	2756	0 2¼	51931
September,	„	316274	6345	0 4¾	loss 429	0 0¼	55916
December,	„	343360	6688	0 4⅝	4616	0 3⅛	64854
March,	1894	285481	6538	0 5⅜	4122	0 3⅜	52674
June,	„	278433	6405	0 5½	2083	0 1¾	43702
September,	„	318253	6451	0 4¾	3623	0 2⅝	53783
December,	„	354205	7232	0 4⅞	5761	0 3⅞	54454
March,	1895	287697	6917	0 5¾	5258	0 4⅜	40798
June,	„	305080	6790	0 5¼	5096	0 4	35098
September,	„ (14 weeks)....	356941	7296	0 4⅞	5008	0 3¼	53564
December,	„	382327	7587	0 4¾	7077	0 4⅜	45828
March,	1896	337266	7395	0 5¼	7052	0 5	43993
June,	„	341050	7579	0 5¼	3617	0 2½	37480
		13533864	256771	0 4½	181063	0 3⅛	..

LONDON BRANCH DRAPERY TRADE.

Since commencing to keep a separate Account.

IN YEARS TO 1890; IN QUARTERS SINCE 1890.

YEAR OR QUARTER ENDED.	SALES.			EXPENSES.		AMOUNT.			Stocks at end.
	Drapery.	Boots and Shoes.	Total.	Amount	Rate.	Profit	Loss.	Rate.	
Year ended:—	£	£	£	£	s. d.	£	£	s. d.	£
December, 1880 (2 q'rters)	1657	6500	8157	312	0 9⅛	36	..	0 1	3805
" 1881..........	12558	13448	26006	1268	0 11⅝	149	..	0 1⅜	7054
" 1882..........	16936	15629	32565	1636	1 0	312	..	0 2¼	9524
" 1883..........	21754	17983	39737	2412	1 2½	286	..	0 1¾	10011
" 1884 (53 weeks)	29003	19826	48829	2807	1 1¾	532	..	0 2⅝	9977
" 1885..........	40448	22324	62772	3554	1 1½	684	..	0 2½	11502
" 1886..........	53749	26090	79839	4529	1 1½	776	..	0 2¼	13713
" 1887..........	63224	19191	82415	5530	1 4	..	191	0 0½	14967
" 1888..........	77888	..	77888	6901	1 9¼	..	1513	0 4⅝	19484
" 1889 (53 weeks)	61455	..	61455	6050	1 11½	..	2959	0 11½	18189
" 1890..........	67084	..	67084	5317	1 7	..	1902	0 6¾	12607
Quarter ended:—									
March, 1891..........	18244	..	18244	1378	1 6⅛	..	138	0 1¾	16268
June, "	18717	..	18717	1437	1 6⅜	..	322	0 4	15276
September, "	17994	..	17994	1434	1 7⅛	103	..	0 1⅜	20145
December, "	23628	..	23628	1503	1 3¼	350	..	0 3½	18030
March, 1892..........	19094	..	19094	1680	1 9	..	360	0 4½	22996
June, "	22580	..	22580	1633	1 5¼	9	..	..	19052
September, "	18706	..	18706	1596	1 8⅜	..	136	0 1⅝	21207
December, "	25421	..	25421	1700	1 4	350	..	0 3¼	19147
March, 1893..........	21041	..	21041	1711	1 7½	..	269	0 3	23054
June, "	20851	..	20851	1763	1 8¼	..	86	0 0⅞	20415
September, "	17206	..	17206	1596	1 10¼	..	283	0 3⅞	23123
December, "	24008	..	24008	1655	1 4½	185	..	0 1¾	20367
March, 1894..........	19615	..	19615	1656	1 8¼	..	81	0 0⅞	21853
June, "	23393	..	23393	1707	1 5½	119	..	0 1⅛	19081
September, "	18959	..	18959	1668	1 9	..	230	0 2⅞	19280
December "	27585	..	27585	1766	1 3¼	433	..	0 3¾	18486
March, 1895..........	20707	..	20707	1763	1 8⅜	..	195	0 2¼	18805
June, "	24475	..	24475	1820	1 5¾	529	..	0 5⅛	17201
September, " (14 weeks)	24131	..	24131	1917	1 7	93	..	0 0⅞	19799
December, "	32648	..	32648	2048	1 3	444	..	0 3¼	21859
March, 1896..........	30293	..	30293	2244	1 5¾	606	..	0 4¾	28660
June, "	33108	..	33108	2401	1 5⅜	551	..	0 3⅞	25072
	948160	140991	1089151	78392	1 5¼	6547	8665	..	..
	Less Profit					..	6547	..	
	Leaves Net Loss					..	2118	0 0⅜	

NOTE.—To September, 1887, and March, 1889, Boot and Shoe and Furnishing figures included respectively.

LONDON BRANCH BOOT AND SHOE TRADE.

Since commencing to keep a separate Account.

IN YEARS TO 1890; IN QUARTERS SINCE 1890.

Year or Quarter ended.	Sales.	Expenses.		Net Profit.		Net Loss.		Stocks at end.
		Amount	Rate.	Amount	Rate.	Amount	Rate.	
Year ended :—	£	£	s. d.	£	s. d.	£	s. d.	£
December, 1887 (13 weeks)	7155	323	0 10¾	..	..	47	0 1½	3891
„ 1888	30103	1593	1 0⅝	89	0 0⅝	..	..	4884
„ 1889 (53 weeks)	32653	1791	1 1⅛	..	..	55	0 0⅜	6305
„ 1890	35527	1933	1 1	165	0 1	..	..	6051
Quarter ended :—								
March, 1891	8866	556	1 3	..	..	57	0 1½	6509
June, „	10440	590	1 1½	..	..	45	0 1	7281
September, „	10833	584	1 0⅞	65	0 1⅜	..	..	7231
December, „	11110	587	1 0⅝	61	0 1¼	..	..	7337
March, 1892	9183	658	1 5⅛	..	..	182	0 4¾	8043
June, „	12742	682	1 0¾	30	0 0½	..	..	7193
September, „	11362	758	1 4	..	..	130	0 2¾	11296
December, „	13157	880	1 4	..	..	284	0 5⅛	12194
March, 1893	10676	883	1 7¾	..	..	248	0 5½	14094
June, „	12507	857	1 4⅜	..	..	193	0 3⅝	13849
September, „	11048	785	1 5	..	..	204	0 4⅜	11781
December, „	11726	790	1 4⅛	..	..	87	0 1¾	10718
March, 1894	10932	775	1 5	..	..	257	0 5⅝	10256
June, „	13799	792	1 1¾	23	0 0⅜	..	..	10810
September, „	12614	797	1 3⅛	..	..	92	0 1⅝	10184
December, „	14775	855	1 1⅞	..	..	90	0 1⅜	10730
March, 1895	11344	836	1 5⅝	..	..	412	0 8⅝	10880
June, „	15560	919	1 2⅛	305	0 4⅝	..	..	12011
September, „ (14 weeks)	14184	886	1 2⅞	636	0 10¾	..	..	11165
December, „	16116	880	1 1	148	0 2⅛	..	..	11182
March, 1896	15188	905	1 2¼	50	0 0¾	..	..	12255
June, „	16606	985	1 2⅛	316	0 4½	..	..	12066
	380206	22880	1 2⅜	1888	..	2383	..	..
Less Profit						1888	..	
Leaves Net Loss						495	0 0¼	

LONDON BRANCH FURNISHING TRADE.

Since commencing to keep a separate Account.

IN YEARS TO 1890; IN QUARTERS SINCE 1890.

Year or Quarter ended.	Sales.	Expenses.		Net Profit.		Net Loss.		Stocks at end.
		Amount	Rate.	Amount	Rate.	Amount	Rate.	
Year ended:—	£	£	s. d.	£	s. d.	£	s. d.	£
December, 1889 (40 weeks)	22084	1805	1 7½	..	..	333	0 3½	4526
„ 1890..........	31873	2682	1 8⅛	..	..	619	0 4⅝	3957
Quarter ended:—								
March, 1891..........	10064	779	1 6½	..	..	78	0 1¾	4613
June, „	9700	779	1 7¼	..	..	85	0 2	4526
September, „	9137	746	1 7½	..	..	170	0 4⅜	4785
December, „	12082	752	1 2⅞	15	0 0¼	..	..	4693
March, 1892..........	9441	812	1 8⅝	..	..	42	0 1	5296
June, „	10944	876	1 7⅛	65	0 1⅜	..	..	5468
September, „	9719	865	1 9¼	..	..	103	0 2½	5532
December, „	10912	936	1 8½	..	..	116	0 2½	5761
March, 1893..........	9509	929	1 11⅜	..	..	269	0 6¾	6513
June, „	9985	893	1 9⅜	..	..	92	0 2⅛	6667
September, „	8588	859	2 0	..	..	249	0 6⅞	6920
December, „	10265	895	1 8⅞	..	..	37	0 0¾	7362
March, 1894..........	10168	857	1 8⅛	51	0 1⅛	..	..	8010
June, „	10491	961	1 9⅞	..	..	138	0 3⅛	8970
September, „	9562	893	1 10⅜	..	..	194	0 4¾	8648
December, „	11323	940	1 7⅞	..	..	80	0 1⅝	8201
March, 1895..........	9430	987	2 1	..	..	137	0 3⅜	8865
June, „	11831	987	1 8	133	0 2⅝	..	..	8295
September, „ (14 weeks)	11503	1009	1 9	..	..	312	0 6½	7930
December, „	14271	1059	1 5¾	183	0 3	..	..	8604
March, 1896..........	13441	1052	1 6¾	81	0 1⅜	..	..	8753
June, „	15286	1113	1 5⅜	271	0 4⅛	..	..	9625
	291609	24466	1 8⅛	799	..	3054	..	..
	Less Profit					799	..	
	Leaves Net Loss					2255	0 1¾	

LEEDS CLOTHING DEPARTMENT.

Since Commencing.

IN YEARS TO 1890; IN QUARTERS SINCE 1890.

YEAR OR QUARTER ENDED.	Net Supplies.	Expenses.				Net Profit.		Net Loss.		Stocks at end.
		Sundry.	Deprecia-tion.	Interest.	Total.	Amount.	Rate.	Amount.	Rate.	
Year ended:—	£	£	£	£	£	£	s. d.	£	s. d.	£
December, 1888 (1 quarter)	318	392	13	8	413	..	..	182	11 5¼	320
" 1889 (53 weeks)	4132	2833	58	49	2940	..	..	812	3 11⅛	495
" 1890	6202	3189	78	71	3338	..	..	131	0 5	1316
Quarter ended:—										
March, 1891	3417	1530	33	28	1591	38	0 2⅝	..	..	1199
June, "	2381	1427	33	30	1490	123	1 0⅜	..	..	1923
September, "	3344	1551	35	34	1620	343	2 0⅕	..	..	2123
December, "	3787	1425	34	29	1488	183	0 11⅓	..	..	1498
March, 1892	4311	2134	35	31	2200	383	1 9¼	..	..	2033
June, "	3816	1938	38	32	2008	128	0 8	..	..	1993
September, "	2695	1770	38	36	1844	..	..	24	0 2⅛	2397
December, "	3654	2083	37	32	2152	153	0 10	..	..	2274
March, 1893	5741	2583	34	34	2651	419	1 5¼	..	..	1825
June, "	4443	2556	35	30	2621	54	0 2⅞	..	..	1959
September, "	5173	2545	35	31	2611	429	1 7⅛	..	..	1687
December, "	2765	2162	35	32	2229	161	1 1⅞	..	..	2898
March, 1894	7619	3492	37	36	3565	463	1 2½	..	..	2034
June, "	6604	3645	38	26	3709	598	1 9⅜	..	..	2139
September, "	5499	2927	40	34	3001	570	2 0⅞	..	..	2297
December, "	4574	2865	40	31	2936	121	0 6¼	..	..	2662
March, 1895	7702	4475	81	67	4623	351	0 10⅘	..	..	2927
June, "	8166	4617	81	60	4758	404	0 11⅜	..	..	2547
September, " (14 weeks)	7598	4255	82	68	4405	457	1 2¾	..	..	2645
December, "	4389	3732	82	59	3873	309	1 4⅞	..	..	5276
March, 1896	9879	5064	82	70	5216	..	..	174	0 6⅝	3898
June, "	10165	5217	82	57	5356	218	0 5⅛	..	..	2792
	128674	70407	1216	1015	72638	5905	..	1323	..	..
				Less Loss.............		1323	..			
				Leaves Net Profit......		4582	0 8½			

CRUMPSALL BISCUIT

Since commencing to

IN YEARS TO 1890; IN

Year or Quarter ended.	Net Supplies.	Production.	Expenses.			
			Sundry.	Depreciation.	Interest.	Total.
Year ended :—	£	£	£	£	£	£
January, 1874 (1 quarter)	2987	2878	604	60	87	751
„ 1875	13189	13124	2190	323	495	3008
„ 1876	13664	13392	2515	324	371	3210
„ 1877 (53 weeks)	15866	16065	3282	398	441	4121
„ 1878	18018	18126	2672	444	500	3616
„ 1879	17553	17289	2798	481	481	3760
December, 1879 (50 weeks)	16623	16454	2852	532	447	3831
„ 1880	19153	19069	2985	572	429	3986
„ 1881	20122	20274	3056	576	429	4061
„ 1882	21632	21578	3095	578	401	4074
„ 1883	21897	21712	3228	589	408	4225
„ 1884 (53 weeks)	21549	21565	3841	665	430	4936
„ 1885	21479	21830	4794	786	454	6034
„ 1886	23534	22885	5815	897	529	7241
„ 1887	28314	29100	6371	1278	745	8394
„ 1888	32079	32155	6616	1364	862	8842
„ 1889 (53 weeks)	42081	42836	7483	1375	929	9787
„ 1890	51916	54197	9431	1394	957	11782
Quarter ended :—						
March, 1891	14526	14346	2476	348	261	3085
June, „	15122	12262	2720	422	296	3438
September, „	21160	24594	3421	503	380	4304
December, „	17753	19740	3257	505	375	4137
March, 1892	15174	14749	3231	506	420	4157
June, „	14880	11629	3065	510	394	3969
September, „	20023	31647	3959	511	452	4922
December, „	20620	17555	3401	511	462	4374
March, 1893	19893	14001	3044	511	436	3991
June, „	19517	17759	3337	514	385	4236
September, „	24309	37197	4252	514	450	5216
December, „	22440	15574	3745	518	437	4700
March, 1894	23343	16512	3685	557	437	4679
June, „	17964	13666	3599	557	377	4533
September, „	31134	42665	4733	557	407	5697
December, „	23664	23668	4070	557	444	5071
March, 1895	23592	18011	3832	558	436	4826
June, „	21919	15798	4030	559	375	4964
September, „ (14 weeks)	31607	40337	5305	559	430	6294
December, „	23135	24325	4256	563	394	5213
March, 1896	26731	20496	4300	564	389	5253
June, „	25767	18396	4167	565	296	5028
	875929	869456	155513	24105	18128	197746

WORKS TRADE.

keep a separate Account.

QUARTERS SINCE 1890.

Year or Quarter ended.	Rate on Production.		Net Profit.		Net Loss.		Stocks at end.
	Per cent.	Per £.	Amount	Rate per £.	Amount	Rate per £.	
Year ended:—	£ s. d.	s. d.	£	s. d.	£	s. d.	£
January, 1874 (1 quarter)	26 1 10	5 2½	15	0 1¼	..	..	1678
„ 1875	22 18 5	4 7	228	0 4⅛	..	..	2029
„ 1876	23 19 5	4 9½	712	1 0¾	..	..	1538
„ 1877 (53 weeks)	25 13 0	5 1½	630	0 9⅜	..	..	2867
„ 1878	19 18 11	3 11⅞	514	0 6¾	..	..	2961
„ 1879	21 15 0	4 4⅛	1518	1 9	..	..	2506
December, 1879 (50 weeks)	23 5 8	4 7⅞	1004	1 2⅝	..	..	2335
„ 1880	20 18 1	4 2⅛	983	1 0½	..	..	1793
„ 1881	20 0 7	4 0	887	0 10⅛	..	..	2105
„ 1882	18 17 7	3 9¼	1498	1 4⅝	..	..	1703
„ 1883	19 9 2	3 10⅝	2081	1 11	..	..	1896
„ 1884 (53 weeks)	22 17 9	4 6⅞	2030	1 10½	..	..	2129
„ 1885	27 12 9	5 6¼	1491	1 4⅜	..	..	3534
„ 1886	31 12 9¾	6 3⅞	..	..	61	0 0½	4207
„ 1887	28 16 10¾	5 9⅛	..	..	3	..	5518
„ 1888	27 9 11½	5 5⅛	..	..	222	0 1⅝	7633
„ 1889 (53 weeks)	22 16 11⅛	4 6¾	1274	0 7¼	..	..	9411
„ 1890	21 14 9⅜	4 4⅛	39	0 0⅛	..	..	12712
Quarter ended:—							
March, 1891	21 10 1	4 3½	769	1 0⅝	..	..	12575
June, „	28 0 9	5 7¼	672	0 10⅝	..	..	12621
September, „	17 10 0	3 6	220	0 2½	..	..	19472
December, „	20 19 1¾	4 7¼	1620	1 9⅞	..	..	22353
March, 1892	28 3 8⅜	5 7⅝	1512	1 11⅞	..	..	19633
June, „	34 2 7⅛	6 9⅞	..	..	178	0 2⅞	19042
September, „	15 11 0⅝	3 1¼	693	0 8¼	..	..	31512
December, „	24 18 3¾	4 11¾	458	0 5¼	..	..	28264
March, 1893	28 10 1⅛	5 8⅜	800	0 9⅝	..	..	22855
June, „	23 17 0⅛	4 9¼	281	0 2⅜	..	..	21623
September, „	14 0 5⅜	2 9⅝	1348	1 1¼	..	..	34095
December, „	20 3 6¾	6 0⅜	..	..	28	0 0¼	25454
March, 1894	28 6 8¾	5 8	763	0 7¾	.	..	17859
June, „	33 3 4	6 7½	729	0 9⅝	..	..	17399
September, „	13 7 0⅝	2 8	3001	1 11⅛	..	..	26252
December, „	21 8 6⅛	4 3⅜	1816	1 6⅜	..	..	26409
March, 1895	26 15 10⅝	5 4¼	1944	1 7¾	..	..	20469
June, „	31 8 5⅛	6 3⅜	1177	1 0⅞	..	..	15611
September, „ (14 weeks)	15 12 0¾	3 1⅜	4083	2 7	..	..	27682
December, „	21 8 7¼	4 3⅜	1810	1 6¾	..	..	28905
March, 1896	25 12 7	5 1½	671	0 6	..	..	20252
June, „	27 6 7⅝	5 5½	967	0 9	..	..	11252
	22 14 10⅜	4 6½	40238	..	492	..	..
Less Loss			492	..	..	..	..
Leaves Net Profit			39746	0 10⅞	..	..	..

LEICESTER BOOT AND

Since commencing to

IN YEARS TO 1890; IN

Year or Quarter ended.	Net Supplies.	Production.	Expenses.			
			Sundry.	Depreciation.	Interest.	Total.
Year ended:—	£	£	£	£	£	£
January, 1874 (1 quarter)	3422	5190	1281	6	29	1316
„ 1875	29456	38684	10047	36	342	10425
„ 1876	53687	53702	16936	124	543	17603
„ 1877 (53 weeks)	62205	60104	20631	246	780	21657
„ 1878	71140	67603	23357	416	1023	24796
„ 1879	73881	72939	25902	424	998	27324
December, 1879 (50 weeks)	77476	77746	28016	417	945	29378
„ 1880	84655	84429	29866	444	1241	31551
„ 1881	87607	89150	32682	448	1087	34217
„ 1882	99098	99517	36388	495	1113	37996
„ 1883	91986	90214	33868	511	1040	35419
„ 1884 (53 weeks)	107166	106333	39237	838	1267	41342
„ 1885	109464	107806	39846	1077	1315	42238
„ 1886	122463	122703	44731	1104	1244	47079
„ 1887	126417	124324	45895	1120	1230	48245
„ 1888	143488	139955	53206	1124	1381	55711
„ 1889 (53 weeks)	172267	175712	65998	1236	1633	68867
„ 1890	206499	220763	81461	1140	2134	84735
Quarter ended:—						
March, 1891	72088	63995	24294	248	687	25229
June, „	64294	59885	23034	249	645	23928
September, „	57530	55491	21329	249	663	22241
December, „	41498	51487	20693	249	684	21626
March, 1892	63457	61229	22467	791	976	24234
June, „	71332	75562	27737	991	1058	29786
September, „	68769	71494	28825	959	1092	30876
December, „	52558	84098	30782	1014	1238	33034
June, 1893 (2 quart'rs)	159833	132940	54024	2289	2881	59194
December, „ „	83463	89370	36717	2350	2752	41819
March, 1894	71373	63209	24971	1182	1393	27546
June, „	81597	74587	28292	1207	1290	30789
September, „	54346	50974	21366	1212	1310	23888
December, „	50722	66658	25589	1220	1285	28094
March, 1895	69745	64692	26480	1227	1422	29129
June, „	85413	73515	28154	1253	1370	30777
September, „ (14 weeks)	64867	64536	26294	1289	1468	29051
December, „	51542	66137	24875	1290	1277	27442
March, 1896	85167	79948	29063	1326	1311	31700
June, „	78011	63901	26444	1342	1278	29064
	3149982	3150582	1180778	33143	45425	1259346

SHOE WORKS TRADE.

keep a separate Account.

QUARTERS SINCE 1890.

Year or Quarter ended.	Rate on Production. Per cent.	Rate on Production. Per £.	Net Profit. Amount	Net Profit. Rate.	Net Loss. Amount	Net Loss. Rate.	Stocks at end.
Year ended:—	£ s. d.	s. d.	£	s. d.	£	s. d.	£
January, 1874 (1 quarter)	25 6 8	5 0¾	..	..	8	0 0½	2579
„ 1875	26 18 11	5 4⅝	584	0 3⅝	..	..	6465
„ 1876	32 15 6	6 6⅝	912	0 4	..	..	9186
„ 1877 (53 weeks)	36 0 6	7 2⅜	886	0 3½	..	..	14131
„ 1878	36 13 6	7 4	211	0 0¾	..	..	12922
„ 1879	37 9 9	7 6	1575	0 5⅛	..	..	14515
December, 1879 (50 weeks)	37 15 8	7 6⅝	1645	0 5	..	..	24733
„ 1880	37 7 4	7 5⅝	..	..	309	0 0⅞	15772
„ 1881	38 8 8	7 8	452	0 1½	..	..	15594
„ 1882	38 3 5	7 7½	1649	0 3⅛	..	..	14192
„ 1883	39 5 2	7 10⅛	190	0 0½	..	..	10384
„ 1884 (53 weeks)	38 17 7	7 9¼	3261	0 7¾	..	..	17800
„ 1885	39 3 7	7 10	3078	0 6¾	..	..	15752
„ 1886	38 7 4⅜	7 8	6059	0 11¾	..	..	17738
„ 1887	38 16 1⅜	7 9⅛	6344	1 0	..	..	19116
„ 1888	39 16 1½	7 11½	6453	0 10¾	..	..	22496
„ 1889 (53 weeks)	39 3 10¼	7 10	8347	0 11⅜	..	..	33265
„ 1890	38 7 7¾	7 8	8743	0 10⅛	..	..	61935
Quarter ended:—							
March, 1891	39 8 5½	7 10½	1201	0 3⅞	..	..	52523
June, „	39 19 1½	7 11⅞	1812	0 6¾	..	..	55257
September, „	40 1 7¼	8 0⅛	755	0 3⅛	..	..	57066
December, „	42 0 0⅝	8 4¾	..	..	1174	0 6¾	62980
March, 1892	39 11 8⅞	7 10⅞	..	..	1131	0 4¼	56163
June, „	39 8 4⅝	7 10½	4119	1 1¾	..	..	55554
September, „	43 3 8¾	8 7⅝	..	..	92	0 0¼	64317
December, „	39 5 7¼	7 10¼	2065	0 9⅜	..	..	97381
June, 1893 (2 quart'rs)	44 10 6⅜	8 10¾	5624	0 8⅜	..	..	77716
December, „ „	46 15 10¼	9 4¼	..	..	6895	1 7¾	83812
March, 1894	43 11 7	8 8½	1501	0 5	..	..	77828
June, „	41 5 7⅛	8 3	4404	1 0⅞	..	..	68833
September, „	46 17 3⅛	9 4⅜	850	0 3¾	..	..	70000
December, „	42 2 11⅛	8 5⅛	2819	1 1¼	..	..	92078
March, 1895	45 0 6½	9 0	2590	0 8⅞	..	..	85337
June, „	41 17 3½	8 4⅜	4280	1 0	..	..	76550
September, „ (14 weeks)	45 0 3⅝	9 0	365	0 1¼	..	..	89206
December, „	41 9 10⅛	8 3½	1254	0 5¾	..	..	101621
March, 1896	39 13 0½	7 11⅛	2258	0 6¼	..	..	89440
June, „	45 9 7⅞	9 1⅛	1939	0 5⅞	..	..	95079
	39 19 5⅛	7 11⅞	88225	..	9609	..	..
Less Loss			9609	..			
Leaves Net Profit			78616	0 5⅞			

HECKMONDWIKE BOOT, SHOE,

Since commencing to

IN YEARS TO 1890;

Year or Quarter ended.	Net Supplies.	Production.	Expenses.			
			Sundry.	Depreciation.	Interest.	Total.
Year ended :—	£	£	£	£	£	£
December, 1880 (2 quart'rs)	3060	3438	1057	16	30	1103
„ 1881	11151	11417	3592	57	157	3806
„ 1882	14602	15454	5041	66	183	5290
„ 1883	16661	16377	5435	68	222	5725
„ 1884 (53 weeks)	18215	18138	5924	94	220	6238
„ 1885	22666	23811	7832	176	256	8264
„ 1886	22231	23418	7867	267	405	8539
„ 1887	22519	19641	7110	313	380	7803
„ 1888	29307	22998	9371	488	588	10447
„ 1889 (53 weeks)	29815	22899	9155	602	687	10444
„ 1890	35135	28054	11036	719	797	12552
Quarter ended :—						
March, 1891..........	11088	8572	3519	183	195	3900
June, „	7363	7954	3257	186	218	3661
September, „	9778	8699	3329	188	247	3764
December, „	14690	9628	3798	188	212	4198
March, 1892..........	11233	9009	3629	188	217	4034
June, „	9206	9412	3490	191	227	3908
September, „	10255	9386	3518	200	250	3968
December, „	15504	11540	4518	205	232	4955
March, 1893..........	12008	10413	4430	227	257	4914
June, „	6678	8720	3685	231	290	4206
September, „	8268	8561	3502	232	312	4046
December, „	13725	8737	3639	241	295	4175
March, 1894..........	11951	7332	3613	238	303	4154
June, „	7382	8415	3644	260	316	4220
September, „	12018	9392	3985	260	317	4562
December, „	15492	11425	4744	261	281	5286
March, 1895..........	12533	10615	4480	265	305	5050
June, „	9750	9253	3941	265	316	4522
September, „ (14 weeks)	13219	11476	4956	266	345	5567
December, „	17209	14055	5195	274	273	5742
March, 1896..........	13288	10392	4910	275	276	5461
June, „	8836	6391	3488	280	296	4064
	476836	415032	160690	7973	9905	178568

AND CURRYING TRADE.

keep a separate Account.

IN QUARTERS SINCE 1890.

YEAR OR QUARTER ENDED.	RATE ON PRODUCTION.		NET PROFIT.		NET LOSS.		Stocks at end.
	Per cent.	Per £.	Amount	Rate.	Amount	Rate.	
Year ended :—	£ s. d.	s. d.	£	s. d.	£	s. d.	£
December, 1880 (2 quart'rs)	32 1 7	6 4⅞	..	..	181	1 0⅝	2473
„ 1881	33 6 8	6 8	..	..	608	1 0¾	2238
„ 1882	34 4 8	6 10⅛	..	..	163	0 2½	4016
„ 1883	34 19 1⅞	6 11⅞	294	0 4½	..	..	3950
„ 1884 (53 weeks)	34 7 10	6 10½	287	0 3¼	..	..	3506
„ 1885	34 14 1	6 11¼	261	0 2¾	..	..	5314
„ 1886	36 9 3⅛	7 3½	375	0 4	..	..	6869
„ 1887	37 10 3⅛	7 6	237	0 2½	..	..	5382
„ 1888	35 3 10⅝	7 0⅜	1021	0 8¼	..	..	10863
„ 1889 (53 weeks)	35 10 8⅛	7 1¼	1922	1 3⅜	..	..	10280
„ 1890	34 15 9⅛	6 11⅜	1398	0 9½	..	..	11325
Quarter ended :—							
March, 1891	36 2 4⅛	7 2⅝	631	1 1⅝	..	..	10903
June, „	36 18 8⅞	7 4⅜	246	0 8	..	..	16018
September, „	35 3 0¾	7 0¼	881	1 9½	..	..	16164
December, „	36 2 0⅝	7 2⅜	1522	2 0⅞	..	..	14594
March, 1892	37 1 5¾	7 5	441	0 9⅜	..	..	13021
June, „	34 7 5	6 10⅜	..	..	246	0 6⅜	15149
September, „	35 5 8¾	7 0⅝	832	1 7⅜	..	..	17802
December, „	36 7 2½	7 3¼	990	1 3¼	..	..	15875
March, 1893	40 1 8¼	8 0⅛	381	0 7½	..	..	17917
June, „	40 4 7	8 0½	..	..	288	0 10¼	21145
September, „	40 2 0	8 0¼	599	1 5⅜	..	..	22321
December, „	39 5 7⅜	7 10¼	440	0 7⅝	..	..	19487
March, 1894	45 9 1⅞	9 1	..	..	219	0 4⅜	18938
June, „	40 14 0¼	8 1⅝	..	..	162	0 5¼	20560
September, „	39 18 9⅛	7 11¾	960	1 7½	..	..	21350
December, „	38 7 7¾	7 8⅛	621	0 9½	..	..	18260
March, 1895	40 3 4⅝	8 0⅜	..	..	119	0 2¼	19835
June, „	39 19 6¼	7 11⅞	968	1 11¾	..	..	21444
September, „ (14 weeks)	39 14 6¼	7 11¼	..	..	167	0 3	21959
December, „	34 0 2⅛	6 9½	1105	1 3⅜	..	..	20711
March, 1896	43 6 0½	8 7⅞	..	..	1253	1 10½	23504
June, „	49 18 7	9 11¾	..	..	791	1 9⅜	21100
	36 19 3¼	7 4⅝	16412	..	4197	..	..
	Less Loss..........		4197	..			
	Leaves Net Profit ..		12215	0 6⅛			

HECKMONDWIKE CURRYING SUPPLIES, &c., stated separately;

Figures included in Heckmondwike Accounts.

Since Commencing.—IN YEARS TO 1890; IN QUARTERS SINCE 1890.

YEAR OR QUARTER ENDED.	Supplies.	EXPENSES.					PROFIT.		LOSS.		Stocks at end.
		Sundry.	Depreciation.	Interest.	Total.	Rate per £ on Supplies.	Amount.	Rate per £ on Supplies.	Amount.	Rate per £ on Supplies.	
Year ended:—	£	£	£	£	£	s. d.	£	s. d.	£	s. d.	£
December, 1887 (1 quarter)	538	391	27	17	435	16 2	55	2 0½	..	..	213
„ 1888	3262	2065	169	119	2353	13 11⅞	413	2 5⅜	..	..	687
„ 1889 (53 weeks)..............	3263	1937	227	143	2307	14 1⅜	..	..	201	1 2¾	306
„ 1890	4103	2361	262	166	2789	13 7⅛	390	1 10¾	..	..	399
Quarter ended:—											
March, 1891	1125	697	66	41	804	14 3½	40	0 8½	..	..	392
June, „	822	615	66	42	723	17 7	..	..	92	2 2¾	525
September, „	1144	598	66	42	706	12 4	226	3 11⅜	..	..	546
December, „	1313	614	66	42	722	10 11⅛	166	2 6¼	..	..	415
March, 1892	936	586	66	42	694	14 9⅞	..	..	73	1 6⅝	353
June, „	799	565	66	42	673	16 10⅛	..	..	101	2 6¼	289
September, „	909	548	66	42	656	14 5⅛	134	2 11¾	..	..	381
December, „	1111	651	66	42	759	13 7⅞	4	0 0¾	..	..	286
March, 1893	1048	632	66	42	740	14 1⅜	229	4 4⅜	..	..	524
June, „	685	587	68	43	698	20 4½	..	..	193	5 7½	593
September, „	1070	496	68	49	613	11 5⅜	84	1 6¾	..	..	332
December, „	992	626	68	49	743	14 11¾	99	1 11⅞	..	..	447
March, 1894	1179	704	68	49	821	13 11	110	1 10⅜	..	..	530
June, „	1087	663	78	54	795	14 7⅜	..	..	22	0 4¾	486
September, „	1348	667	85	59	811	12 0⅜	265	3 11⅛	..	..	442
December, „	1017	756	85	60	901	17 3⅞	12	0 2¾	..	..	651
March, 1895	1242	641	85	60	786	12 7⅞	3	0 0½	..	..	447
June, „	1046	679	86	58	823	15 8¾	7	0 1½	..	..	488
September, „ (14 weeks)..............	1313	862	87	59	1008	15 4⅛	..	..	21	0 3¾	548
December, „	1451	824	87	51	962	13 3	71	0 11⅝	..	..	355
March, 1896	1116	831	87	43	961	17 2⅝	..	..	76	1 4¼	415
June, „	1178	739	87	47	873	14 9¾	30	0 6	..	..	326
	35197	21335	2318	1503	25156	14 3½	2338	..	779	..	..
					Less Loss		779	..			
					Leaves Net Profit..		1559	0 10⅝			

DUNSTON CORN MILL.

Since Commencing.

IN QUARTERS.

Quarter ended.		Net Supplies.	Production.	Expenses.				Rate on Production.		Net Profit.		Net Loss.		Stocks at end.
				Sundry.	Depreciation.	Interest.	Total.	Per cent.	Per £.	Amount	Rate.	Amount	Rate.	
		£	£	£	£	£	£	£ s. d.	s. d.	£	s. d.	£	s. d.	£
June,	1891 (10 weeks)....	34732	36691	2175	707	688	3570	9 14 7⅛	1 11¼	801	0 5½	..	..	39000
September,	„	75942	76460	3251	1448	1086	5785	7 11 3¾	1 6⅛	..	..	1803	0 5	34734
December,	„	68009	71953	3568	1476	1259	6303	8 15 2¼	1 9	459	0 1½	..	..	72252
March,	1892	83456	83203	3899	1518	1383	6800	8 3 5⅜	1 7½	..	..	5871	1 4	57084
June,	„	84665	84703	4040	1521	1239	6800	8 0 6⅜	1 7¼	..	..	12718	3 0	37373
September,	„	89872	89748	3803	1584	1143	6530	7 5 6⅛	1 5¾	1865	0 4⅞	..	..	28902
December,	„	85271	89150	4497	1632	1147	7276	8 3 2¾	1 7½	..	..	1114	0 3⅛	46831
March,	1893	73340	74627	3846	1639	1239	6724	9 0 2⅜	1 9⅝	..	..	3507	0 11⅜	43646
June,	„	76162	76018	4152	1639	1203	6994	9 4 0	1 10	..	..	1492	0 4⅝	34368
September,	„	82852	84479	4950	1645	1223	7818	9 5 1	1 10⅛	..	..	1072	0 3	40873
December,	„	79154	78734	4438	1647	1256	7341	9 6 5⅝	1 10¾	..	..	1007	0 3	42620
March,	1894	75455	75530	4194	1647	1268	7109	9 8 2⅞	1 10½	..	..	1208	0 3¾	40251
June,	„	69008	64350	5323	1647	1216	8186	12 14 5	2 6½	..	..	5003	1 5⅜	44520
September,	„	60771	57835	4981	1647	1301	7929	13 14 2¼	2 8⅞	..	..	3736	1 2¾	63226
December,	„	74472	73261	5309	1648	1345	8302	11 6 7⅝	2 3⅛	288	0 0⅞	..	..	65020
March,	1895	88585	76960	4794	1653	1218	7665	9 19 2¼	1 11⅞	660	0 1¾	..	..	32947
June,	„	100936	94272	5825	1659	1243	8727	9 5 1⅝	1 10⅛	1248	0 2⅞	..	..	48039
September,	„ (14 weeks)....	107439	105683	6862	1676	1459	9997	9 9 2¼	1 10⅜	622	0 1⅜	..	..	92577
December,	„	111047	108979	6252	1682	1303	9237	8 9 6⅛	1 8¼	704	0 1½	..	..	71974
March,	1896	109573	108816	6935	1684	1148	9767	8 19 6⅛	1 9½	905	0 1⅞	..	..	56691
June,	„	110490	108221	5832	1684	1347	8863	8 3 9½	1 7⅜	31	..	..	..	89125
		1741231	1719673	98926	35083	25714	157723	9 3 5⅛	1 10	7586	..	38531	..	..
								Less Profit........................				7586	..	
								Leaves Net Loss....................				30945	0 4¼	

DURHAM SOAP WORKS SUPPLIES,

Since

IN YEARS TO 1894;

YEAR OR QUARTER ENDED.	Net Supplies.	Production.	Expenses.			
			Sundry.	Depreciation.	Interest.	Total.
Year ended:—	£	£	£	£	£	£
January, 1875 (2 quart'rs)	2099	2976	130	75	85	290
,, 1876	9264	9309	512	155	213	880
,, 1877 (53 weeks)	9549	9725	488	177	271	936
,, 1878	11098	11913	684	336	448	1468
,, 1879	11735	11169	883	345	430	1658
December, 1879 (50 weeks)	8903	9387	715	277	349	1341
,, 1880	11730	11404	781	289	323	1393
,, 1881	11871	12265	842	292	376	1510
,, 1882	12801	12504	795	292	350	1437
,, 1883	14751	15941	910	299	359	1568
,, 1884 (53 weeks)	15219	14721	849	327	343	1519
,, 1885	17911	17994	1117	320	300	1737
,, 1886	15886	15783	1623	320	252	2195
,, 1887	15280	14888	1516	320	244	2080
,, 1888	21756	22126	1916	320	269	2505
,, 1889 (53 weeks)	24643	23986	1821	328	299	2448
,, 1890	28456	28318	1800	327	255	2382
,, 1891	33432	32303	1869	173	269	2311
,, 1892	33981	32528	1842	172	268	2282
,, 1893	37900	37716	1974	173	218	2365
,, 1894	37684	35759	2118	176	263	2557
Quarter ended:—						
March, 1895	8256	8180	582	45	87	714
June, ,, ...	8915	8551	547	45	96	688
September, ,, (14 weeks)	8963	9168	521	44	65	630
December, ,, ...	6031	6554	382	45	48	475
March, 1896	5706	4744	314	52	50	416
Works closed, March 26th, 1896.	423820	419912	27531	5724	6530	39785

IRLAM SOAP

Since Commencing.

QUARTER ENDED.	Net Supplies.	Production.	Expenses.			
			Sundry.	Depreciation.	Interest.	Total.
	£	£	£	£	£	£
September, 1895 (7 weeks)	4496	11161	796	197	186	1179
December, ,, (13 weeks)..............	22503	21230	2801	610	470	3881
March, 1896 (13 weeks)..............	20319	22511	2894	664	542	4100
June, ,, (13 weeks)..............	25609	25372	3078	675	622	4375
	72927	80274	9569	2146	1820	13535

EXPENSES, PROFIT, AND STOCKS.

Commencing.

IN QUARTERS SINCE 1894.

Year or Quarter ended.	Rate on Production.		Net Profit.		Net Loss.		Stocks at end
	Per cent.	Per £.	Amount.	Rate.	Amount.	Rate.	
Year ended:—	£ s. d.	s. d.	£	s. d.	£	s. d.	£
January, 1875 (2 quart'rs)	9 14 10	1 11¼	19	0 1½	..	..	1809
„ 1876	9 9 0	1 10⅜	236	0 6	..	..	1303
„ 1877 (53 weeks)	9 12 6	1 11	191	0 4⅝	..	..	3871
„ 1878	12 6 5	2 5½	..	..	307	0 6⅛	3721
„ 1879	14 16 10	2 11⅝	..	..	670	0 2⅜	3180
December, 1879 (50 weeks)	14 5 8	2 10¼	..	..	115	0 2⅞	3769
„ 1880	12 4 3	2 5¼	138	0 2⅞	..	..	3571
„ 1881	12 6 2	2 5½	132	0 2½	..	..	3707
„ 1882	11 9 10	2 3½	..	..	99	0 1⅞	2628
„ 1883	9 16 8	1 11⅝	62	0 0⅞	..	..	5185
„ 1884 (53 weeks)	10 6 4	2 0¾	97	0 1⅜	..	..	3489
„ 1885	9 13 0	1 11⅛	907	1 0	..	..	4361
„ 1886	13 18 1¾	2 9⅛	741	0 11⅛	..	..	3999
„ 1887	13 19 5	2 9½	524	0 8⅛	..	..	3637
„ 1888	11 6 5⅛	2 3⅛	590	0 6½	..	..	5448
„ 1889 (53 weeks)	10 4 1⅜	2 0⅜	234	0 2¼	..	..	4938
„ 1890	8 8 2¾	1 8⅛	733	0 6⅕	..	..	5097
„ 1891	7 3 0⅞	1 5⅛	1248	0 8⅛	..	..	5694
„ 1892	7 0 3⅝	1 4¾	2316	1 4¼	..	..	3251
„ 1893	6 5 4⅕	1 3	2192	1 1⅕	..	..	3051
„ 1894	7 3 0⅛	1 5⅛	2366	1 3	..	..	6400
Quarter ended:—							
March, 1895	8 14 6¾	1 8⅞	753	1 9⅞	..	..	8372
June, „	8 0 11	1 7¼	566	1 3½	..	..	4780
September, „ (14 weeks)	6 17 5⅛	1 4½	649	1 5⅜	..	..	2860
December, „	7 4 11⅜	1 5⅜	910	3 0⅛	..	..	3755
March, 1896	8 15 4½	1 9	535	1 10⅛	..	..	2046
	9 9 5⅞	1 10⅝	16139	..	1191	..	..
	Less Loss........		1191	..			
Works closed, March 26th, 1896.	Leaves Net Profit		14948	0 8⅜			

WORKS.

QUARTERLY ACCOUNTS.

Quarter ended.	Rate on Production.		Net Profit.		Net Loss.		Stocks at end.
	Per cent.	Per £.	Amount	Rate.	Amount	Rate.	
	£ s. d.	s. d.	£	s. d.	£	s. d.	£
September, 1895 (7 weeks)	10 11 3¼	2 1¼	..	..	774	3 5¼	26556
December, „ (13 weeks)	18 5 7⅜	3 7¾	1143	1 0⅛	..	..	30825
March, 1896 (13 weeks)	18 4 3⅛	3 7⅝	1099	1 0⅞	..	..	38007
June, „ (13 weeks)	17 4 10⅜	3 5⅜	1781	1 4⅝	..	..	39592
	16 17 2⅝	3 4⅜	4023	..	774	..	..
	Less Loss		774	..			
	Leaves net Profit		3249	0 10⅝			

BATLEY WOOLLEN

Since

IN YEARS TO 1890;

Year or Quarter ended.	Net Supplies.	Production.	Expenses.			
			Sundry.	Depreciation.	Interest	Total.
	£	£	£	£	£	£
Year ended:—						
December, 1887	2478	8495	3720	131	164	4015
„ 1888	11590	13836	6063	297	513	6873
„ 1889 (53 weeks)	17189	12332	5705	333	534	6572
„ 1890	13069	12955	5485	363	396	6244
Quarter ended:—						
March, 1891	4002	3885	1507	96	102	1705
June, „	4342	4455	1515	100	105	1720
September, „	3973	4054	1487	100	102	1689
December, „	4701	4784	1758	100	98	1956
March, 1892	4882	4428	1580	100	99	1779
June, „	3898	3826	1453	107	96	1656
September, „	3706	3501	1322	107	98	1527
December, „	3669	4115	1444	108	97	1649
March, 1893	4863	4346	1465	112	103	1680
June, „	4270	4719	1743	118	104	1965
September, „	4205	3877	1391	119	106	1616
December, „	4175	4297	1526	119	101	1746
March, 1894	3582	3574	1302	119	101	1522
June, „	4290	4747	1466	119	106	1691
September, „	6397	5684	1703	120	103	1926
December, „	6284	6409	1668	119	97	1884
March, 1895	4942	4426	1281	119	87	1487
June, „	4551	5438	1580	119	95	1794
September, „ (14 weeks)	7345	7293	2014	119	102	2235
December, „	7188	7096	1933	119	88	2140
March, 1896	7278	7106	1886	119	84	2089
June, „	6482	6274	1635	161	111	1907
	153351	155952	55632	3643	3792	63067

MILL TRADE.

Commencing.

IN QUARTERS SINCE 1890.

Year or Quarter ended.	Rate on Production.		Net Profit.		Net Loss.		Stocks at end.
	Per cent.	Per £.	Amount	Rate.	Amount	Rate.	
	£ s. d.	s. d.	£	s. d.	£	s. d.	£
Year ended:—							
December, 1887	47 5 3⅛	9 5⅜	..	..	483	3 10¾	8061
„ 1888	49 13 5⅞	9 11⅛	..	..	1629	2 9⅝	11876
„ 1889 (53 weeks).	53 5 10⅛	10 7⅞	..	..	3918	4 6⅝	7308
„ 1890	48 3 11⅜	9 7⅝	..	..	766	1 2	7326
Quarter ended:—							
March, 1891	43 17 8¾	8 9¼	..	..	13	0 0¾	6888
June, „	38 12 1⅛	7 8⅝	277	1 3¼	..	..	7168
September, „	41 13 3	8 4	228	1 1¾	..	..	7391
December, „	40 17 8⅝	8 2⅛	130	0 6½	..	..	7740
March, 1892	40 2 1¼	8 0⅜	10	0 0⅜	..	..	6461
June, „	43 5 7¾	8 7¾	188	0 11½	..	..	6613
September, „	43 12 3¾	8 8⅝	51	0 3¼	..	..	6745
December, „	40 1 5⅜	8 0⅛	76	0 4⅛	..	..	7557
March, 1893	38 13 1⅜	7 8¾	170	0 8⅜	..	..	6895
June, „	41 12 9⅛	8 3⅛	..	..	21	0 1⅛	7254
September, „	41 13 7½	8 4	..	..	8	0 0⅛	6906
December, „	40 12 8	8 1½	171	0 9¾	..	..	6943
March, 1894	42 11 8⅜	8 6⅛	..	..	85	0 5⅝	6579
June, „	35 12 5⅛	7 1½	200	0 11⅛	..	..	7847
September, „	33 17 8¼	6 9¼	318	0 11⅛	..	..	7426
December, „	29 7 10⅞	5 10½	389	1 2¾	..	..	6353
March, 1895	33 11 11¼	6 8⅝	176	0 8⅛	..	..	5444
June, „	32 19 9⅛	6 7⅛	119	0 6¼	..	..	7714
September, „ (14 weeks).	30 12 10⅞	6 1⅛	281	0 9⅛	..	..	7707
December, „	30 3 1⅞	6 0½	382	1 0¾	..	..	8139
March, 1896	29 7 11⅜	5 10½	295	0 9⅝	..	..	6977
June, „	30 7 10¾	6 0⅞	287	0 10½	..	..	6737
	40 8 9½	8 1	3748	..	6923	..	..
		Less Profit			3748	..	
		Leaves Net Loss			3175	0 4⅞	

BROUGHTON CABINET WORKS.

STATEMENT SHOWING SUPPLIES, EXPENSES, STOCKS, ALSO RESULT OF WORKING,

Since Commencing.

NOTE.—These Figures are included in the Manchester Furnishing Department Account up to June Quarter, 1895, inclusive, now separately stated in Productive Accounts.

QUARTER ENDED.	Supplies.	EXPENSES.				RESULT OF WORKING.		Stocks at end.
		Sundry.	Depreciation.	Interest.	Total.	Loss.	Rate per £ on Supplies.	
	£	£	£	£	£	£	s. d.	£
December, 1892 ..	..	..	..	..	..	..	..	307
March, 1893 ..	394	545	..	16	561	68	3 5⅜	1355
June, „ ..	1158	998	125	100	1223	217	3 8⅞	2431
September, „ ..	1545	1007	115	107	1229	132	1 8½	2687
December, „ ..	1302	938	109	106	1153	213	3 3¼	3360
March, 1894 ..	1417	1083	109	114	1306	201	2 10	3888
June, „ ..	1686	1281	109	118	1508	122	1 5¼	4569
September, „ ..	3095	1916	112	129	2157	97	0 7½	4808
December, „ ..	3255	1686	113	128	1927	*208	1 3¼	5343
March, 1895 ..	1745	1366	111	135	1612	311	3 6¾	5711
June, „ ..	1978	1384	104	133	1621	199	2 0⅛	5905
†September, „ ..	2368	1550	104	131	1785	*3	0 0¼	6800
December, „ ..	2480	1688	105	109	1902	*44	0 4¼	7257
March, 1896 ..	1896	1429	103	118	1650	392	4 1½	7836
June, „ ..	3025	1726	103	122	1951	168	1 1¼	7524
	27344	18597	1422	1566	21585	2120	..	..
					Less Profit........	255	..	
					Leaves Net Loss ..	1865	1 4¼	

* Profit † Fourteen weeks.

BROUGHTON CLOTHING WORKS.

STATEMENT SHOWING SUPPLIES, EXPENSES, STOCKS, ALSO RESULT OF WORKING,

Since commencing to publish separate Accounts in the Balance Sheet.

Quarter ended.	Supplies.	Expenses.				Result of Working.			Stocks at end.
		Sundry.	Depreciation.	Interest.	Total.	Profit.	Rate per £ on Supplies.		
	£	£	£	£	£	£	s.	d.	£
†September, 1895 ..	3668	2368	83	58	2509	64	0	4⅛	712
December, ,, ..	3893	2552	88	48	2688	190	0	11⅝	1003
March, 1896 ..	5113	3161	92	55	3308	*185	0	8⅝	1197
June, ,, ..	6315	3857	92	57	4006	237	0	9	1307
	18989	11938	355	218	12511	306	0	3¾	..

* Loss. † Fourteen weeks.

MANCHESTER PRINTING DEPARTMENT.

From its Commencement.

QUARTERLY ACCOUNTS.

Quarter ending	Supplies.	Expenses.						Result of Working.			Stocks at end.
		Sundry.	Depreciation.	Interest.	Total.	Rate per £ on Supplies.		Profit.	Rate per £ on Supplies.		
	£	£	£	£	£	s.	d.	£	s.	d.	£
†March, 1895	296	280	50	36	366	24	8¾	*50	3	4½	399
June, ,,	1662	739	154	115	1008	12	1½	60	0	8⅝	432
‡Sept., ,,	2284	1030	175	136	1341	11	8⅞	168	1	5⅝	666
Dec., ,,	3270	1342	212	128	1682	10	3⅜	297	1	9¾	1089
March, 1896	3579	1431	228	136	1795	9	9	175	0	11⅜	783
June, ,,	3272	1435	241	147	1823	11	1⅝	121	0	8¾	832
	14463	6257	1060	698	8015	11	1	771	1	0¾	..

* Loss. † Seven weeks. ‡ Fourteen weeks.

LONGTON CROCKERY

Since

IN YEARS TO 1890;

Year or Quarter ended.	Supplies.			Total Expenses.		
	Selves.	Scottish.	Total.	Amount.	Rate.	
	£	£	£	£	s.	d.
Year ended :—						
December, 1886 (2 quarters)	3968	..	3968	372	1	10½
" 1887	11925	304	12229	876	1	5⅛
" 1888	14473	1072	15545	1000	1	3⅜
" 1889 (53 weeks)......	17466	1183	18649	1174	1	3
" 1890	21792	981	22773	1644	1	5¼
Quarter ended :—						
March, 1891	6157	26	6183	425	1	4⅜
June, "	5600	..	5600	483	1	8⅝
September, "	5687	..	5687	433	1	6¼
December, "	9794	..	9794	478	0	11⅝
March, 1892	6774	..	6774	485	I	5⅛
June, "	7744	..	7744	523	1	4⅛
September, "	7569	..	7569	473	1	2⅞
December, "	7540	..	7540	533	1	4⅞
March, 1893	5809	..	5809	529	1	9¾
June, "	4977	..	4977	558	2	2⅞
September, "	5628	..	5628	503	1	9⅜
December, "	6666	..	6666	527	1	6⅞
March, 1894	5564	..	5564	552	1	11¾
June, "	6712	..	6712	544	1	7⅜
September, "	7054	..	7054	502	1	5
December, "	9058	..	9058	563	1	2⅞
March, 1895	7103	..	7103	577	1	7⅜
June, "	6677	..	6677	675	2	0¼
September, " (14 weeks)......	8097	..	8097	707	1	8⅞
December, "	9918	..	9918	771	1	6⅝
March, 1896	7200	..	7200	755	2	1⅛
June, "	7356	..	7356	742	2	0⅛
	224308	3566	227874	17404	1	6¼

DEPÔT TRADE, &c.,

Commencing.

IN QUARTERS SINCE 1890.

Year or Quarter ended.	Net Profit.		Net Loss.		Stocks at end.
	Amount.	Rate.	Amount.	Rate.	
	£	s. d.	£	s. d.	£
Year ended:—					
December, 1886 (2 quarters)	..	..	37	0 2⅛	540
„ 1887	179	0 3½	..	..	596
„ 1888	353	0 5⅜	..	..	1116
„ 1889 (53 weeks)	533	0 6¾	..	..	1929
„ 1890	543	0 5⅝	..	..	3053
Quarter ended:—					
March, 1891	137	0 5¼	..	..	3014
June, „	104	0 4⅜	..	..	2948
September, „	14	0 0½	..	..	2716
December, „	233	0 5⅝	..	..	2884
March, 1892	22	0 0¾	..	..	3411
June, „	114	0 3½	..	..	3699
September, „	166	0 5¼	..	..	2963
December, „	379	1 0	..	..	2868
March, 1893	58	0 2⅜	..	..	3254
June, „	..	..	59	0 2¾	3159
September, „	88	0 3¾	..	..	3083
December, „	252	0 9	..	..	2829
March, 1894	1	..	..	..	2973
June, „	110	0 3⅞	..	..	3195
September, „	164	0 5½	..	..	2899
December, „	427	0 11¼	..	..	2518
March, 1895	207	0 6⅞	..	..	3077
June, „	148	0 5¼	..	..	2956
September, „ (14 weeks)	65	0 1⅞	..	..	3174
December, „	325	0 7¾	..	..	3306
March, 1896	48	0 1½	..	..	3933
June, „	..	..	41	0 1¼	4112
	4670	..	137	..	..
Less Loss	137	..			
Leaves Net Profit	4533	0 4¾			

DISTRIBUTIVE EXPENSES AND RATE PER CENT ON

	TOTALS.		MANCHESTER	
			GROCERY.	
SALES =	**£9,276,768.**		**£4,550,717.**	
Expenses =	Amount.	Rate per £100.	Amount.	Rate per £100.
	£	d.	£	d.
Wages	89924·41	232·64	26181·60	138·08
Auditors' Fees	300·00	0·78	147·13	0·78
„ Deputation Fees	15·98	0·04	7·70	0·04
„ Fares	99·67	0·25	48·86	0·26
„ Deputation Fares	25·33	0 06	12·23	0·06
Fees and Mileages—General and Branch Committees	1794·08	4 64	510·99	2·70
„ „ Stocktakers	63·07	0·16	6·09	0·03
„ „ Scrutineers	11·35	0 02	5·55	0·03
„ „ Secretaries	90·00	0·23	25·00	0·13
„ „ Deputations	1021·75	2·65	393·22	2·07
Fares and Contracts—General and Branch Committees	873·47	2·26	252·24	1·33
„ „ Stocktakers	18 76	0·05	1·11	0·01
„ „ Scrutineers	10·77	0 02	5·22	0·02
„ „ Deputations	827·83	2·14	334·14	1·76
Price Lists: Printing	1736·30	4·49	800·31	4·23
„ Postage	366·50	0·95	178·10	0·94
Balance Sheets: Printing	418·25	1·08	200·16	1·06
Printing and Stationery	6374·98	16·49	2312·47	12·20
Periodicals	149·39	0·38	69·38	0 36
Travelling	8062·76	20·86	1544·00	8·14
Stamps	4648·11	12·02	2101·69	11·08
Telegrams	512·68	1·32	331·32	1·75
Petty Cash	447·27	1·16	206·75	1·09
Advertisements	496·47	1·28	245·84	1·30
Rents, Rates, and Taxes	4590·18	11·87	1123·04	5·92
Coals, Gas, and Water	3125·11	8·09	1005·04	5·30
Oil, Waste, and Tallow	464·99	1·20	290·58	1·53
Exhibition Expenses	128·03	0·33	15·19	0·08
Expenses: Quarterly Meetings	574·72	1·70	360·91	1·90
Repairs, Renewals, &c.	4330·55	11·20	1970·53	10·40
Legal	81·98	0·20	31·38	0·17
Telephones	341·37	0·88	119·88	0·63
"Annual"	110 ·82	2·85	540·33	2·84
Conference Expenses	197·90	0·51	63·78	0·33
Employés' Picnic	126·23	0·32	47·41	0·25
Dining-rooms	5783·95	14·96	2658·77	14·02
Insurance—Fire and Guarantee	2484·13	6·42	395·98	2·09
Depreciation: Land	2197·99	5·68	650·45	3·43
„ Buildings	9745·60	25·21	2246·78	11·85
„ Fixtures	5982·27	15·37	1663·77	8·77
Interest	39966·06	103·40	12530·45	66·09
Totals	199512·07	516·16	61635·37	325·05

SALES FOR THE YEAR ENDING DECEMBER 28TH, 1895.

MANCHESTER.

DRAPERY.		WOOLLENS AND READY-MADES.		BOOTS AND SHOES.		FURNISHING.	
£440,160.		**£75,573.**		**£268,967.**		**£191,462.**	
Amount.	Rate per £100.	Amount.	Rate per £100.	Amount.	Rate per £100.	Amount.	Rate per £100.
£	d.	£	d.	£	d.	£	d.
11045·90	602·29	1781·43	565·72	4360·52	389·09	4542·06	569·35
14·28	0·78	2·46	0·78	8·81	0·78	6·05	0·76
0·77	0·04	0·14	0·04	0·51	0·05	0·34	0·04
4·72	0·26	0·81	0·26	2·89	0·26	2·01	0·26
1·22	0·07	0·23	0·07	0·81	0·07	0·52	0·07
82·97	4·52	13·92	4·42	50·13	4·47	34·58	4·34
12·67	0·69	2·31	0·73	2·58	0·23	1·97	0·25
0·54	0·03	0·09	0·03	0·33	0·03	0·22	0·03
7·36	0·40	0·61	0·19	4·06	0·36	2·96	0·38
86·40	4·71	29·07	9·23	35·42	3·12	29·91	3·75
27·02	1·47	4·35	1·38	15·55	1·39	10·75	1·35
2·74	0·15	0·50	0·16	0·81	0·07	1·56	0·20
0·52	0·03	0·09	0·03	0·33	0·03	0·21	0·03
57·67	3·14	20·94	6·65	25·88	2·31	24·53	3·08
41·40	2·26	8·40	2·67	9·02	0·80	114·60	14·37
9·81	0·53	1·20	0·38	2·45	0·22	18·55	2·33
19·26	1·05	3·26	1·03	11·71	1·05	8·24	1·04
523·47	28·57	89·55	28·44	320·70	28·62	222·49	27·89
4·67	0·25	0·96	0·31	3·15	0·28	2·55	0·32
980·89	53·48	689·82	219·07	169·16	15·09	452·43	56·71
201·70	11·00	34·87	11·07	124 45	11·10	85·80	10·75
13·58	0·74	15·00	4·77	3·85	0·34	8·91	1·12
31·07	1·69	6·92	2·20	20·63	1·84	15·11	1·89
5·69	0·31	71·23	22·62	47·40	4·23	1·92	0·24
484·53	26·42	51·54	16·37	231·04	20·62	326·99	40·99
149·83	8·17	14·04	4·46	80·51	7·18	72·70	9·09
28·21	1·54	4·79	1·52	17·12	1·53	11·90	1·49
1·32	0·07	0·19	0·06	0·74	0·06	0·57	0·07
34·98	1·90	6·01	1·91	21·59	1·93	14·84	1·86
495·90	27·04	75·34	23·92	127·43	11·37	170·76	21·40
2·57	0·14	0·36	0·12	1·45	0·13	1·10	0·14
13·06	0·71	10·14	3·22	4·97	0·44	22·54	2·82
52·42	2·86	9·12	2·90	32·86	3·00	22·24	2·78
5·80	0·32	1·18	0·38	3·07	0·27	2·46	0·31
12·54	0·68	1·08	0·35	6·39	0·57	6·43	0·81
607·34	33·11	101·57	32·25	364·06	32·48	257·35	32·26
335·66	18·30	35·98	11·43	177·40	15·83	89·40	11·20
373·90	20·39	43·63	13·86	231·77	20·68	319·40	40·03
1292·55	70·48	162·25	51·53	719·89	64·24	1019·73	127·82
1024·38	55·85	91·57	29·08	454·69	40·57	418·43	52·45
5526·07	301·31	768·40	244·02	3241·30	289·22	2014·69	252·54
23617·38	1287·75	4155·35	1319·63	10937·43	975·95	10359·80	1298·61

DISTRIBUTIVE EXPENSES AND RATE PER CENT ON

	NEWCASTLE.					
	GROCERY.		DRAPERY.		BOOTS & SHOES.	
SALES =	**£1,655,011.**		**£305,448.**		**£139,752.**	
Expenses =	Amount.	Rate per £100.	Amount.	Rate per £100.	Amount.	Rate per £100.
	£	d.	£	d.	£	d.
Wages	11983·54	173·78	4498·37	353·45	1888·03	324·23
Auditors' Fees	53·56	0·78	9·92	0·78	4·54	0·78
„ Deputation Fees	2·86	0·04	0·55	0·04	0·25	0·04
„ Fares	17·81	0·26	3·29	0·26	1·51	0·26
„ Deputation Fares	4·55	0·07	0·88	0·06	0·40	0·07
Fees and Mileages—General & Branch Committees	404·15	5·87	104·95	8·25	36·69	6·30
„ „ Stocktakers	4·32	0.06	3·44	0·27	1·55	0·27
„ „ Scrutineers	2·03	0·03	0·37	0·02	0·17	0·03
„ „ Secretaries	13·16	0·20	7·53	0·59	0·74	0·14
„ „ Deputations	114·89	1·66	34·90	2·74	8·46	1·45
Fares and Contracts—General and Branch Committees	178·71	2·60	37·65	2·96	17·72	3·04
„ Stocktakers	0·48	0·01	0·32	0·02	0·19	0·04
„ Scrutineers	1·93	0·03	0·36	0·02	0·17	0·03
„ Deputations	83·57	1·21	18·82	1·48	8·27	1·42
Price Lists: Printing	150·11	2·18	....	....	67·52	11·60
„ Postage	37·16	0·54	....	....	0·26	0·05
Balance Sheets: Printing	49·55	0·72	9·07	0·71	4·14	0·72
Printing and Stationery	724·65	10·51	218·97	17·21	137·81	23·66
Periodicals	18·92	0·28	3·02	0·24	2·39	0·40
Travelling	627·38	9·10	521·43	40·97	281·81	48·40
Stamps	497·44	7·22	158·35	12·44	51·12	8·78
Telegrams	108·72	1·58	4·00	0·32	4·00	0·68
Petty Cash	98·07	1·42	7·79	0·61	3·78	0·64
Advertisements	43·54	0·63	4·10	0·32	17·59	3·02
Rents, Rates, and Taxes	458·22	6·64	218·50	17·17	219·88	37·76
Coals, Gas, and Water	567·05	8·22	161·70	12·70	47·32	8·13
Oil, Waste, and Tallow	47·27	0·69	8·50	0·66	3·88	0·66
Exhibition Expenses	5·38	0·07	0·87	0·07	0·42	0·08
Expenses: Quarterly Meetings	40·76	0·58	7·60	0·60	3·50	0·60
Repairs, Renewals, &c	355·72	5·16	55·29	4·35	12·98	2·23
Legal	11·05	0·15	1·80	0·15	0·85	0·15
Telephones	95·51	1·39	18·74	1·48	9·04	1·55
"Annual"	196·89	2·85	36·51	2·87	16·72	2·87
Conference Expenses	38·63	0·55	6·82	0·54	3·08	0·52
Employés' Picnic	8·70	0·12	7·33	0·58	2·44	0·41
Dining-rooms	645·68	9·36	176·37	13·86	80·77	13·87
Insurance—Fire and Guarantee	171·93	2·49	201·14	15·81	93·78	16·10
Depreciation: Land	131·03	1·90	95·05	7·47	60·13	10·33
„ Buildings	721·90	10·47	549·00	43·14	338·53	58·14
„ Fixtures	416·48	6·04	400·99	31·50	194·76	33·45
Interest	4445·14	64·46	2491·12	195·73	1286·88	221·00
Totals	23578·44	341·92	10085·41	792·44	4914·07	843·90

SALES FOR THE YEAR ENDING DECEMBER 28TH, 1895.

NEWCASTLE.		LONDON.							
FURNISHING.		GROCERY.		DRAPERY.		BOOTS & SHOE.		FURNISHING.	
£111,433.		**£1,332,045.**		**£101,961.**		**£57,204.**		**£47,035.**	
Amount.	Rate per £100.	Amount.	Rate per £100.	Amount.	Rate per £100.	Amount.	Rate per £100.	Amount.	Rate p'r £100.
£	d.	£	d.	£	d.	£	d.	£	d.
2851·54	614·16	13525·87	243·70	3595·72	846·38	1691·98	709·87	1977·84	1009·21
3·61	0·78	43·00	0·78	3·28	0·78	1·84	0·78	1·51	0·77
0·21	0·04	2·27	0·04	0·18	0·04	0·11	0·05	0·08	0·04
1·21	0·25	14·34	0·26	1·10	0·26	0·61	0·26	0·51	0·26
0·32	0·05	3·59	0·06	0·28	0·07	0·16	0·07	0·13	0·07
28·93	6·24	391·24	7·05	82·35	19·38	29·66	12·45	23·52	12·00
3·50	0·75	13·10	0·24	5·44	1·28	2·99	1·26	3·09	1·58
0·15	0·03	1·63	0·03	0·13	0·03	0·07	0·03	0·05	0·02
0·58	0·12	18·96	0·34	7·49	1·76	0·86	0·36	0·69	0·35
6·96	1·50	235·21	4·24	22·25	5·24	15·68	6·58	9·38	4·80
13·63	2·94	266·15	4·80	25·38	5·97	13·36	5·60	10·98	5·61
0·24	0·05	9·36	0·17	0·20	0·05	0·17	0·07	1·08	0·55
0·14	0·03	1·54	0·03	0·12	0·03	0·06	0·03	0·05	0·03
7·02	1·52	208·41	3·75	18·79	4·42	12·29	5·16	7·50	3·83
3·75	0·80	482·98	8·70	16·18	3·81	5·98	2·51	36·05	18·40
0·24	0·05	117·14	2·11	....	....	0·82	0·35	0·77	0·39
3·32	0·72	94·92	1·71	7·23	1·70	4·05	1·70	3·34	1·70
147·96	31·87	1138·33	20·51	267·70	63·01	88·25	37·03	182·64	93·19
4·89	1·04	36·93	0·67	1·53	0·37	0·51	0·21	0·50	0·25
178·06	38·35	1094·46	19·72	763·09	179·62	374·67	157·20	385·57	196·74
130·32	28·07	1086·00	19·57	87·04	20·48	50·45	21·17	38·88	19·84
4·00	0·86	16·83	0·30	1·36	0·32	0·60	0·25	0·51	0·26
4·72	1·02	42·02	0·75	7·33	1·72	1·08	0·45	2·00	1·02
7·39	1·60	29·34	0·53	1·55	0·37	19·82	8·32	1·06	0·53
224·46	48·35	824·04	14·85	134·98	31·77	101·98	42·80	191·00	97·46
40·75	8·78	790·10	14·24	85·45	20·11	32·39	13·60	78·23	39·92
3·11	0·67	46·74	0·84	1·48	0·36	0·76	0·32	0·66	0·34
0·34	0·07	82·87	1·49	10·09	2·37	5·70	2·39	4·35	2·21
2·73	0·59	71·30	1·29	5·15	1·21	2·95	1·24	2·40	1·22
48·61	10·47	765·04	13·78	150·41	35·40	5·78	15·01	66·78	34·08
0·69	0·15	29·51	0·53	0·57	0·13	0·33	0·14	0·28	0·15
7·08	1·52	35·16	0·63	2·49	0·59	1·56	0·65	1·16	0·59
13·19	2·84	157·43	2·83	11·86	2·79	6·77	2·84	5·49	2·80
2·64	0·57	65·88	1·19	2·29	0·54	1·27	0·53	1·01	0·51
1·22	0·25	16·80	0·30	5·85	1·38	1·42	0·60	8·63	4·40
65·70	14·15	560·86	10·10	132·68	31·23	72·34	30·35	60·48	30·86
105·57	22·74	415·78	7·50	225·48	53·07	119·39	50·09	116·64	59·52
130·15	28·03	93·40	1·68	38·13	8·97	12·13	5·01	18·80	9·59
769·47	165·73	1071·08	19·30	454·57	107·00	154·83	64·96	245·02	125·02
310·36	66·85	592·72	10·68	257·87	60·70	75·98	31·88	80·28	40·96
1398·64	301·24	4097·20	73·82	1112·80	261·93	579·83	243·27	473·54	241·63
6527·40	1405·84	28589·56	515·11	7547·87	1776·64	3521·48	1477·44	4042·48	2062·70

The Co-operative Union Limited.

OFFICES: LONG MILLGATE, MANCHESTER.

WHAT IS THE CO-OPERATIVE UNION?

IT is an institution charged with the duty of keeping alive and diffusing a knowledge of the principles which form the life of the Co-operative movement, and giving to its active members, by advice and instruction—literary, legal, or commercial—the help they may require, that they may be better able to discharge the important work they have to do.

WHAT HAS IT DONE?

THE greater part of the legal advantages enjoyed by Co-operators originated in the action of the Central Board of the Union, and the Central Committee which it succeeded. They may be summarised as follows:—

(1) The right to deal with the public instead of their own members only.
(2) The incorporation of the Societies, by which they have acquired the right of holding in their own name lands or buildings and property generally, and of suing and being sued in their own names, instead of being driven to employ trustees.
(3) The power to hold £200 instead of £100 by individual members of our Societies.
(4) The limitation of the liability of members for the debts of the Society to the sum unpaid upon the shares standing to their credit.
(5) The exemption of Societies from charge to income tax on the profits of their business, under the condition that the number of their shares shall not be limited.
(6) The authorising one Registered Society to hold shares in its own corporate name to any amount in the capital of another Registered Society.
(7) The extension of the power of members of Societies to bequeath shares by nomination in a book, without the formality of a will or the necessity of appointing executors, first from £30 to £50, and now to £100, by the Provident Nominations and Small Intestacies Act, 1883, which also makes this power apply to loans and deposits as well as to shares.
(8) The Industrial and Provident Societies Act, 1871, which enables Societies to hold and deal with land freely.
(9) The Industrial and Provident Societies Act, 1876, which consolidated into one Act the laws relating to these Societies, and, among many smaller advantages too numerous to be mentioned in detail, gave them the right of carrying on banking business whenever they offer to the depositors the security of transferable share capital.
(10) The Industrial and Provident Societies Act, 1893.

The Union consists of Industrial and Provident Societies, Joint-Stock Companies, and other bodies corporate.

No Society is admitted into Union unless its management is of a representative character, nor unless it agree—

(1) To accept the statement of principles in the rules of the Union as the rules by which it shall be guided in all its own business transactions.
(2) To contribute to the fund called the Congress Fund the annual payment following:—
    (*a*) If the number of members of any such Society is less than 1,000, then the sum of 2d. for each member.
    (*b*) If the number of such members exceeds 1,000, then, at least, the sum of 2,000d.

In estimating the number of members of a Society comprising other Societies, each such Society is considered to be one member.

The subscription is considered due, 1d. in the first and 1d. in the third quarter of each year, but may be wholly paid in the first quarter.

The financial year commences on January 1st in each year, and ends on December 31st following.

N.B.—Secretaries forwarding Cheques on account of the Union are requested to make them payable to the Co-operative Union Limited; Money Orders to A. WHITEHEAD, Cashier.

SUMMARY OF THE LAW RELATING TO SOCIETIES

UNDER THE

INDUSTRIAL AND PROVIDENT SOCIETIES ACT, 1893.

I. The Formation of Societies—

1. Application must be made to the Registrar of Friendly Societies, in London, Edinburgh, or Dublin, according to the case, on a form supplied by the office, signed by seven persons and the secretary, accompanied by two copies of the rules, signed by the same persons.

2. These rules must provide for twenty matters stated on the form of application.

3. No fees charged on the registration of a society.

N.B.—Model rules on these twenty matters can be obtained from the Registrar's office; and the CO-OPERATIVE UNION LIMITED, LONG MILLGATE, MANCHESTER, publishes, at the cost of 1½d. a copy, general rules, approved of by the Chief Registrar, providing also for many other matters on which rules are useful; and capable of being adopted, either with or without alterations, by a few special rules, with a great saving in the cost of printing.

The General Secretary of the Union will prepare such special rules, without charge, on receiving a statement of the rules desired.

II. Rights of a Registered Society—

1. It becomes a body corporate, which can by its corporate name sue and be sued, and hold and deal with property of any kind, including shares in other societies or companies, and land to any amount.

2. Its rules are binding upon its members, though they may have signed no assent to them; but may be altered by amendments duly made as the rules provide, and registered, for which a fee of 10s. is charged. The application for registration mnst be made on a form supplied by the Registrar's office.

3. It can sue its own members, and can make contracts, either under its seal or by a writing signed by any person authorised to sign, or by word of mouth of any person authorised to speak for it, which will be binding wherever a contract similarly made by an individual would bind him.

4. It may make all or any of its shares either transferable or withdrawable, and may carry on any trade, including the buying and selling of land, and banking under certain conditions, and may apply the profits of the business in any manner determined by its rules; and, if authorised by its rules, may receive money on loan, either from its members or others, to any amount so authorised.

5. If it has any withdrawable share capital it may not carry on banking, but may take deposits, within any limits fixed by its rules, in sums not exceeding 10s. in any one payment, or £20 for any one depositor, payable at not less than two clear days' notice.

6. It may make loans to its members on real or personal security; and may invest on the security of other societies or companies, or in any except those where liability is unlimited.

7. It may make provision in its rules for the settlement of disputes between members and the Society or any officer thereof, and any decision given in accordance with the conditions stated in the rules is binding on all parties to the dispute, and is not removable into any court of law.

8. If the number of its shares is not limited either by its rules or its practice, it is not chargeable with income tax on the profits of its business.

9. It can, in the way provided by the Act, amalgamate with or take over the business of any other society, or convert itself into a company.

10. It can determine the way in which disputes between the society and its officers or members shall be settled.

11. It can dissolve itself, either by an instrument of dissolution signed by three-fourths of its members, or by a resolution passed by a three-fourths vote at a special general meeting, of which there are two forms—(A) purely voluntary, when the resolution requires confirmation at a second meeting; (B) on account of debts, when one meeting is sufficient. In such a winding up hostile proceedings to seize the property can be stayed.

III. Rights of Members (see also *IV.*, 4, 5, 6)—

1. They cannot be sued individually for the debts of the society, nor compelled to pay more towards them than the sum remaining unpaid on any shares which they have either expressly agreed to take or treated as their property, or which the rules authorise to be so treated.

2. If they transfer or withdraw their shares, they cannot be made liable for any debts contracted subsequently, nor for those subsisting at the time of the transfer or withdrawal, unless the other assets are insufficient to pay them.

3. Persons not under the age of 16 years may become members, and legally do any acts which they could do if of full age, except holding any office.

4. An individual or company may hold any number of shares allowed by the rules, not exceeding the nominal value of £200, and any amount so allowed as a loan. A society may hold any number of shares.

5. A member who holds at his death not more than £100 in the society as shares, loans, or deposits, may, by a writing recorded by it, nominate, or vary or revoke the nomination of any persons to take this investment at his death; and if he dies intestate, without having made any subsisting nomination, the committee of management of the society are charged with the administration of the fund; subject in either case to a notice to be given to the Commissioners of Inland Revenue whenever the sum so dealt with exceeds £80.

6. The members may obtain an inquiry into the position of the society by application to the Registrar.

IV. Duties of a Registered Society—

1. It must have a registered office, and keep its name painted or engraved outside, and give due notice of any change to the Registrar.

2. It must have a seal on which its name is engraved.

3. It must have its accounts audited at least once a year, and keep a copy of its last balance sheet and the auditors' report constantly hung up in its registered office.

4. It must make to the Registrar, before the 31st of March in every year, a return of its business during the year ending the 31st December previous, and supply a copy of its last returns gratis to every member and person interested in its funds on application.

5. It must allow any member or person interested in its funds to inspect his own account and the book containing the names of the members.

6. It must supply a copy of its rules to every person on demand, at a price not exceeding one shilling.

7. If it carries on banking, it must make out in February and August in every year, and keep hung up in its registered office, a return, in a form prescribed by the Act; and it has also to make a return every February to the Stamp-office under the Banking Act.

The non-observance by a Society of these duties exposes it and its officers to penalties varing from £1 to £50, which are in some cases cumulative for every week during which the neglect lasts.

THE

"Co-operative News"

AND

JOURNAL OF ASSOCIATED INDUSTRY.

The Official Organ of Industrial and Provident Co-operative Societies.

CIRCULATION, **45,000** WEEKLY.

THE *NEWS* is the property of a Federation of Co-operative Societies located in all parts of Great Britain. It is an exponent of opinion, thoroughly impartial and comprehensive, upon all subjects connected with Association, particularly in its application to the Distribution and Production of Wealth.

ALFRED MARSHALL, M.A. (Professor of Political Economy at the University of Cambridge), speaking at the Co-operative Congress at Ipswich, referred to the *Co-operative News* as **"A Marvellous Paper! A Wonderful and Unprecedented Pennyworth!"**

Mr. N. O. NELSON, of St. Louis, U.S.A., says:—"The *News* is a magnificent organ of the movement—a splendid compendium of co-operative facts and news, and lacking nothing in literary merit."

The *News* may be had by application to any Bookseller, through the Local Stores, or from the Offices of the Society,

LONG MILLGATE, MANCHESTER;
119, PAISLEY ROAD, GLASGOW;
AND
35, RUSSELL STREET, COVENT GARDEN, LONDON, W.C.

PRICE ONE PENNY WEEKLY.

Sold at many of the Stores at One Halfpenny.

THE

CO-OPERATIVE INSURANCE CO.

LIMITED.

ESTABLISHED 1867.

HEAD OFFICE:

Long Millgate, Manchester.

PRINCIPAL AGENCIES:

SCOTTISH CO-OPERATIVE WHOLESALE SOCIETY LIMITED,
119, Paisley Road, Glasgow;
And each Branch of the Co-operative Wholesale Society Limited.

DIRECTORS:

Chairman—Mr. WILLIAM BARNETT, Macclesfield.
Mr. WM. BAMFORTH, Manchester.
Mr. JAMES BREARLEY, Rochdale.
Mr. B. HEPWORTH, Heckmondwike.
Mr. W. A. HILTON, Bolton.
Mr. A. MILLER, Glasgow.
Mr. T. RAWLINSON, Burnley.
Mr. T. WOOD, Manchester.

AUDITORS:

Mr. A. HACKNEY, Bolton, and Mr. J. E. LORD, Rochdale.

MANAGER:

JAMES ODGERS.

BANKERS:

THE CO-OPERATIVE WHOLESALE SOCIETY LIMITED.

THE

Co-operative Insurance Company Limited

Was registered on August 29th, 1867, to save the difference between the premiums usually charged for insurance and the actual losses and central and local expenses incurred.

This difference consists of two parts—

(1) Any excess of Agents' Commission over fair payment for local work done; such commissions being fixed percentages, irrespective of the ratios of losses and expenses of management.

(2) The balances of premiums left after paying claims, expenses, and commissions; such balances increasing the funds when the claims do not exceed the average, and reducing them when the claims are exceptionally heavy.

Every member, whether a shareholder or not, guarantees £5, no part of which is to be paid up except in the remote contingency of the Company being wound up. In the latter event no loss can be suffered under these guarantees, unless the fully subscribed capital of £50,000 should prove insufficient to meet the liabilities.

The balances of premiums are required by the Articles of Association to be accumulated to form three separate Insurance Funds, for the Fire, Fidelity, and Life Departments respectively, "neither of which shall be available for the payment of a dividend to shareholders as such," this growth of the funds being needed to provide for the growing liabilities of the Company under its policies.

The income from the investments of the Life Insurance Fund is credited to that fund, the profits of which are divisible exclusively with Life policy-holders. The balance of the income from all other investments after paying an annual dividend of 6 per cent upon one-fifth of the shareholders' liability, *i.e.*, upon the four shillings per share called up, is carried to the Reserve Fund to increase the general security.

The following statement shows the progress of the Company to the end of 1894:—

Year.	No. of Society Members.	Subscrib'd Capital, 4s. per Share Called up.	Fire Insurance.		Fidelity Guarantee.		Life Insurance.		Commission Allowed to Society Agents.	Funds in excess of Paid-up Capital.
			Premiums after Deducting Re-Insurances.	Losses.	Pre-miums.	Losses.	Pre-miums.	Claims.		
	Sev	en £	£	£	£	£	£	£	£	£
1868..	mont	hs only--	included	with	next	year.				
1869..	41	1,715	208	6	67	Nil.	Nil.	Nil.	* Includes Bonus for first Seven Years.	188
1870..	41	1,715	157	1	123	..	..	..		378
1871..	42	4,216	173	Nil.	162	..	..	..		597
1872..	46	6,468	256	62	253	..	..	..		961
1873..	51	9,494	369	28	392	3	..	..	Nil.	1,488
1874..	64	10,706	571	29	449	200	..	..	2	2,121
1875..	71	11,314	1,075	1,861	559	Nil.	..	..	*100	1,508
1876..	89	11,877	1,725	39	457	..	..	..	18	3,444
1877..	96	12,365	3,896	1,613	525	270	..	..	34	5,250
1878..	109	13,208	6,343	6,933	399	Nil.	..	..	51	3,545
1879..	128	15,996	5,114	3,888	568	23	..	..	142	4,094
1880..	144	17,698	3,405	3,403	543	50	..	..	229	3,425
1881..	169	19,377	3,062	2,738	541	402	..	..	357	3,068
1882..	180	20,170	2,834	1,741	537	692	..	..	426	3,197
1883..	194	22,985	3,111	2,275	551	278	..	..	509	3,403
1884..	204	23,760	3,448	461	620	286	..	..	470	5,369
1885..	236	26,475	4,425	2,463	777	1,132	..	..	552	5,665
1886..	260	29,020	4,711	1,117	699	300	118	..	588	8,007
1887..	268	30,540	5,590	1,387	803	794	613	..	663	10,655
1888..	278	31,855	6,138	1,245	786	225	963	..	672	14,761
1889..	287	33,775	6,702	3,400	894	726	1,069	125	722	17,153
1890..	293	43,465	7,393	3,005	958	37	1,256	100	745	21,376
1891..	305	50,000	8,086	2,634	1,070	268	1,692	47	835	26,767
1892..	317	50,000	9,199	5,261	1,188	222	1,950	117	898	31,063
1893..	337	50,000	10,002	3,530	1,306	308	2,017	274	1,002	37,676
1894..	356	50,000	11,044	1,574	1,494	822	2,205	429	1,114	46,058
1895..	382	50,000	13,128	3,753	1,494	59	2,380	294	1,241	55,533

All Co-operative Societies in the United Kingdom that are not yet connected with the Company are invited to join it as members and agents. By doing so they will be entitled to take part, by representation, in the general meetings which elect the directors and control the administration: and will obtain the usual commission on insurances effected through their agency, including commission on insurances of their own corporate property.

FIRE DEPARTMENT BEGUN 1868.

Claims Paid, £54,447.

Insurances against loss by Fire are effected on Co-operative Stores, Dwelling-houses, Schools, Public Buildings, Churches, Chapels, Farming Property, and most other classes of risk.

Losses by Lightning are paid, also losses by the Explosion of Coal Gas in buildings other than gasworks.

Societies are invited to transfer Insurances from other companies to the "Co-operative." Their members are also invited to have their Houses, Furniture, and other property insured by it.

FIDELITY DEPARTMENT BEGUN 1869.

Claims Paid, £7,097.

POLICIES are issued insuring Co-operative Societies against loss by acts of Embezzlement or Theft committed by persons employed by them in situations of trust.

LIFE DEPARTMENT BEGUN 1886.

Claims Paid, £1,386.

LOW RATES.—Expenses and commissions are limited to 12½ per cent of the premiums. Surplus divisible exclusively with Life policy-holders. Claims paid immediately after proof of death and title. All reasonable facilities given to prevent lapsing of policies. Liberal surrender values.

PREMIUMS FOR THE ASSURANCE OF £100 AT DEATH.

Age next Birthday.	Single Premium.	Yearly.	Half-yearly.	Quarterly.	Age next Birthday.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
20	37 7 9	1 15 7	0 18 8	0 9 7	20
30	43 14 5	2 5 8	1 4 0	0 12 3	30
40	51 11 2	3 1 5	1 12 3	0 16 6	40
50	61 2 3	4 8 4	2 6 4	1 3 9	50

ANNUAL PREMIUMS FOR THE ASSURANCE OF £100 ON ATTAINING A SPECIFIED AGE OR AT PREVIOUS DEATH.

Age next Birthday.	Payable at Death or at Age				Age next Birthday.
	50	**55**	**60**	**65**	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
20	3 0 6	2 11 10	2 5 10	2 1 10	20
30	4 16 4	3 16 6	3 4 4	2 16 6	30
40	10 4 11	6 14 11	5 1 7	4 3 3	40
50	....	....	10 13 1	7 5 6	50

CHILDREN'S ENDOWMENT ASSURANCES, WITHOUT MEDICAL EXAMINATION,

Payable only on the attainment of age 18, 21, or 25, and Deferred Endowment Assurances, payable either on the attainment of age 50, or at previous Death after age 21—the Premiums (according to the scale selected) being either not returnable or returnable (except the first year's premium) in case of Death before the sum assured is payable.

These policies carry the right to participation in the profits of the not medically examined section of the Life business of the Company.

The Rates of Premium for the various Assurances will be supplied on application.

Policies Assuring £25, £50, and £75 are issued for proportionate parts of the premium for £100, subject to the limitation that no Life Policy is issued for a less premium than Five Shillings.

Forms of Application for Admission of Societies as Members, and for Appointment as Agents; also Proposal Forms for Insurance, and full information, may be obtained from the Office as above.

THE

LANCASHIRE AND YORKSHIRE

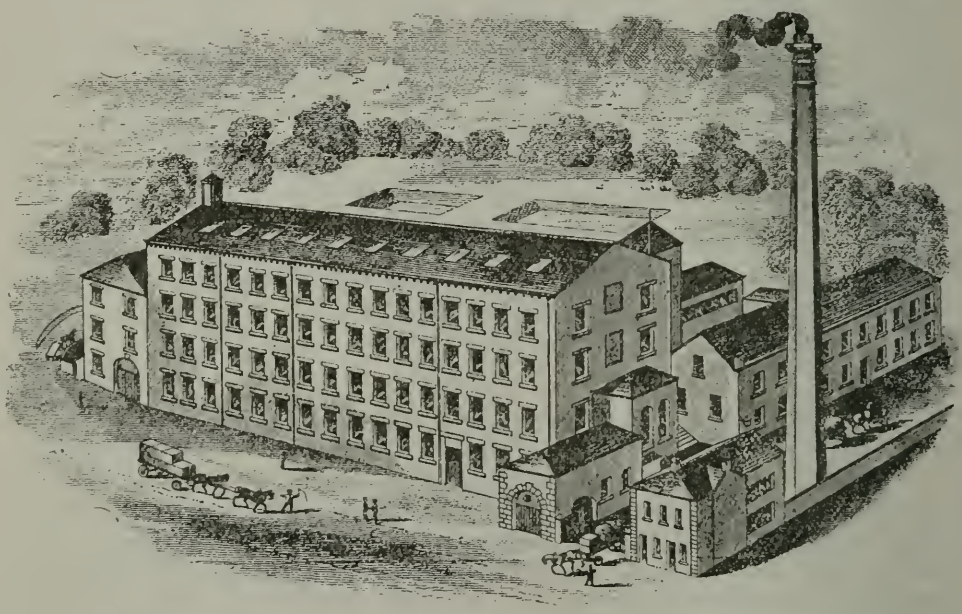
Productive Society Limited,

MANUFACTURERS OF

Anti-Rheumatic

and

Domestic Flannels.



Hare Hill Mills, Littleborough,

NEAR MANCHESTER.

The Celebrated Economic Flannels.

Lancashire & Yorkshire Productive Society Ltd.

WE BEG MOST RESPECTFULLY TO ASK YOUR KIND AND GENEROUS SUPPORT OF THE ABOVE SOCIETY.

The various descriptions of Flannels now made are admitted by those who have fully tried them to be unsurpassed in Make, Weight, Quality, and Price.

IT IS EARNESTLY REQUESTED THAT ALL CO-OPERATIVE SOCIETIES PRESS THE SALE OF THESE FLANNELS AMONGST THEIR MEMBERS.

Economy is the order of the day, and we are fully justified in describing the Flannels made at the above mills as the

CELEBRATED . . .
ECONOMIC FLANNELS.

Whenever you are buying be sure and ask for them.

THEY CAN BE HAD AT ANY OF THE FOLLOWING CO-OPERATIVE ESTABLISHMENTS :—

1, Balloon Street, Manchester;
Waterloo Street, Newcastle-on-Tyne;
Leman Street, Whitechapel, London;
Scottish Co-operative Wholesale Society,
Paisley Road, Glasgow;

AND AT

THE MILLS, HARE HILL ROAD, LITTLEBOROUGH.

THE LANCASHIRE AND YORKSHIRE PRODUCTIVE SOCIETY LIMITED, LITTLEBOROUGH.

STATEMENT SHOWING CONDITION AND PROGRESS OF THE SOCIETY SINCE ITS COMMENCEMENT.

DATE.	Share Redemption Fund.	Share Capital.	LOAN CAPITAL.				Profits.	Losses.	SALES.		
			Co-operative Societies.	Friendly Societies.	Individuals.	Total.			Co-operative.	Merchants.	Totals.
	£	£	£	£	£	£	£	£	£	£	£
Year ending January 9, 1875..	..	6195	..	50	341	391	..	..	..	..	..
,, ,, ,, 8, 1876..	..	6495	2388	920	1273	4581	..	1440	7500	183	7683
,, ,, ,, 6, 1877..	..	6600	2972	1091	1461	5524	114	..	9923	3486	13409
,, ,, , 5, 1878..	..	6600	2946	1382	1723	6051	..	1040	5771	7593	13364
10½ Months ending November 16, 1878..	..	*2640	2856	1268	1269	5393	..	†2417	4019	7541	11560
In Liquidation.											
10½ Months ending October 4, 1879	..	2640	2985	1325	1326	5636	138	..	5189	3091	8270
Year ,, ,, 2, 1880	..	2640	5419	1411	1529	8389	364	..	14140	667	14807
,, ,, ,, 1, 1881	..	2640	5609	1484	1652	8745	80	..	14214	774	14988
,, ,, ,, 7, 1882	..	2640	6797	1580	1858	10235	43	..	14399	1682	16081
,, ,, ,, 6, 1883	..	2640	6966	1662	1850	10478	80	..	13688	4996	18684
,, ,, ,, 4, 1884	..	2640	7150	1745	1986	10881	134	..	19297	1651	20948
,, ,, ,, 4, 1885	..	2640	8346	1834	2090	12270	213	..	20044	1495	21539
,, ,, ,, 2, 1886	175	2640	8561	1948	2297	12809	178	..	22149	1833	23982

THE LANCASHIRE AND YORKSHIRE PRODUCTIVE SOCIETY LIMITED, LITTLEBOROUGH.

STATEMENT SHOWING CONDITION AND PROGRESS OF THE SOCIETY SINCE ITS COMMENCEMENT.

Continued.

DATE.	Share Redemption Fund.	Share Capital.	LOAN CAPITAL.				Profits.	Losses.	SALES.		
			Co-operative Societies.	Friendly Societies.	Individuals.	Total.			Co-operative.	Merchants.	Totals.
	£	£	£	£	£	£	£	£	£	£	£
Year ending October 1, 1887	392	2640	8780	2046	2388	13214	178	..	19519	3036	22555
„ „ „ 6, 1888	143	2640	9008	2149	2767	13924	..	298	17476	4520	21996
„ „ „ 5, 1889	..	2640	9252	2257	3014	14523	..	285	19676	6026	25702
„ „ „ 4, 1890	..	2640	9500	2375	3296	15171	..	664	17838	5255	23093
„ „ „ 3, 1891	..	2640	9762	2496	3150	15708	..	336	20324	3990	24314
„ „ „ 1, 1892	..	2640	10039	2622	3347	16008	173	..	21300	3090	24390
„ „ „ 7, 1893	..	2640	10330	2751	3518	16602	181	..	22236	3079	25315
„ „ „ 6, 1894	..	‡6600	9448	..	2079	11527	§34	..	19804	4011	23815
„ „ „ 5, 1895	..	6600	9511	..	2126	11637	53	..	21091	2442	23536
„ „ „ 3, 1896	..	6600	9511	..	2217	11728	211	..	20927	2433	23360

---

* Share Capital reduced from £1 to 8s. per share. † Including bad debts of £553, and formation expenses of £269. ‡ Share Capital increased from 8s. to £1 per share. § Profit and losses since October 6, 1894, is after allowing interest at the rate of 4½ per cent per annum on the Share Capital.

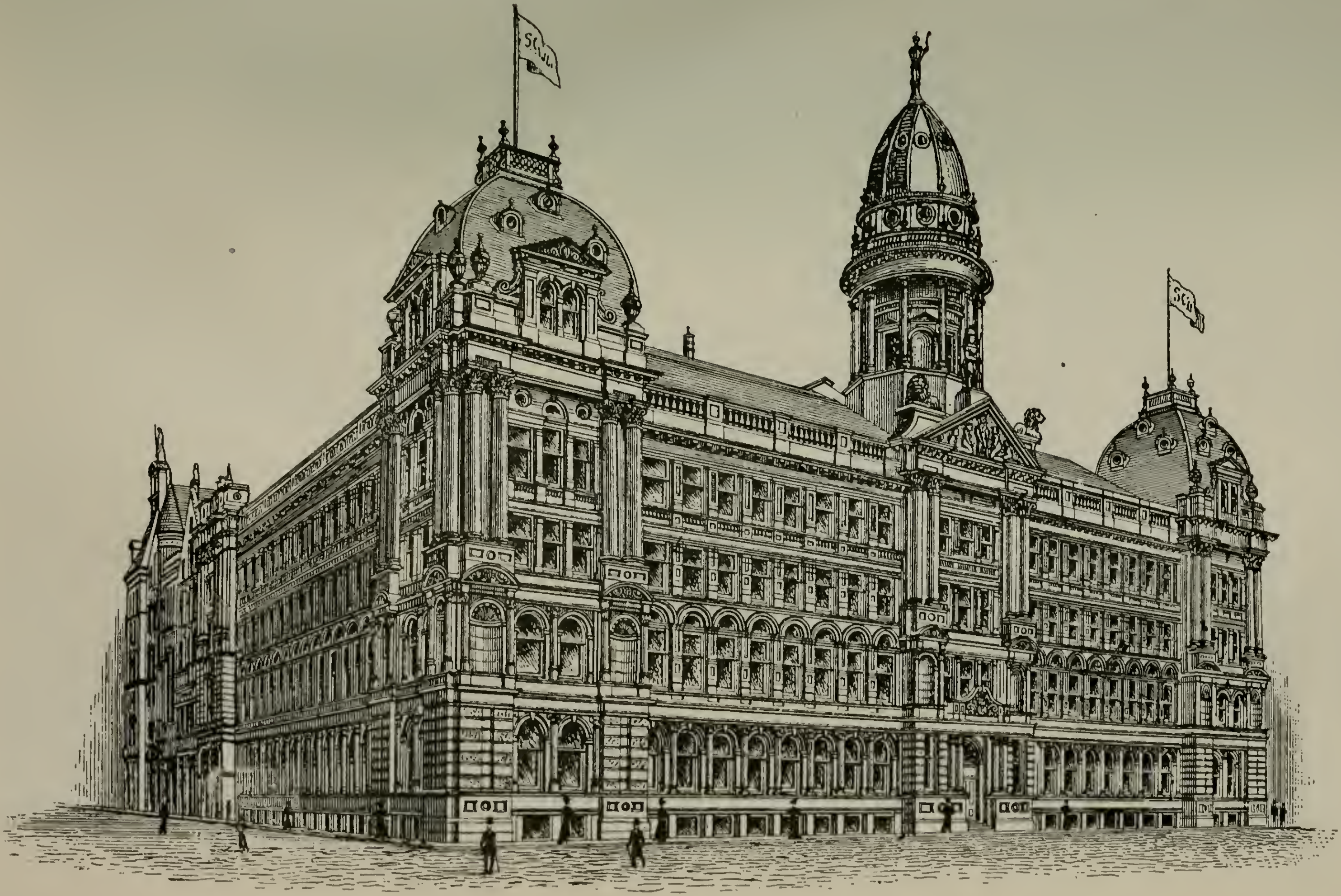
THE

SCOTTISH CO-OPERATIVE WHOLESALE SOCIETY

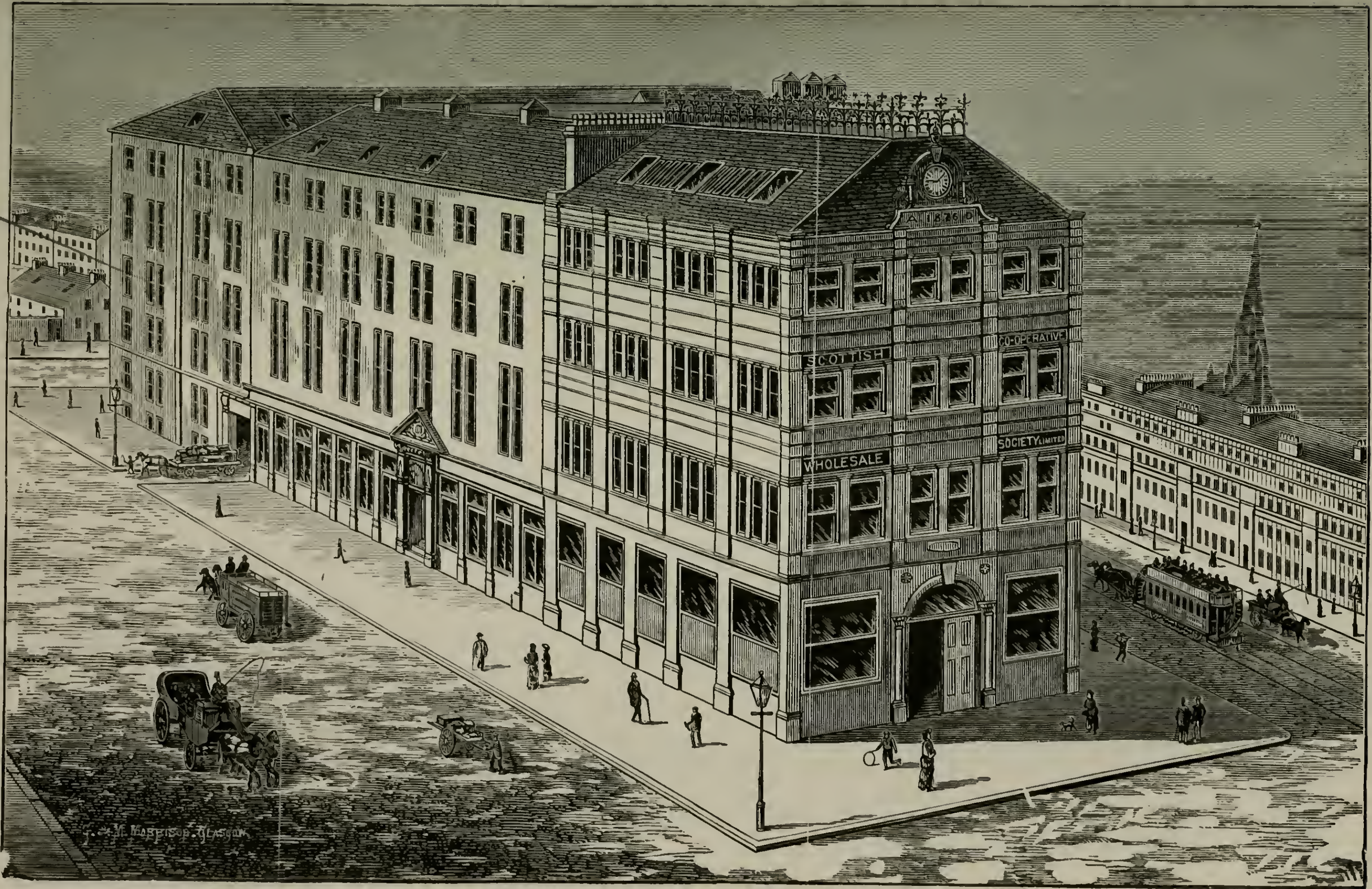
LIMITED.

PLATES, ADVERTISEMENTS, STATISTICS, &c.,

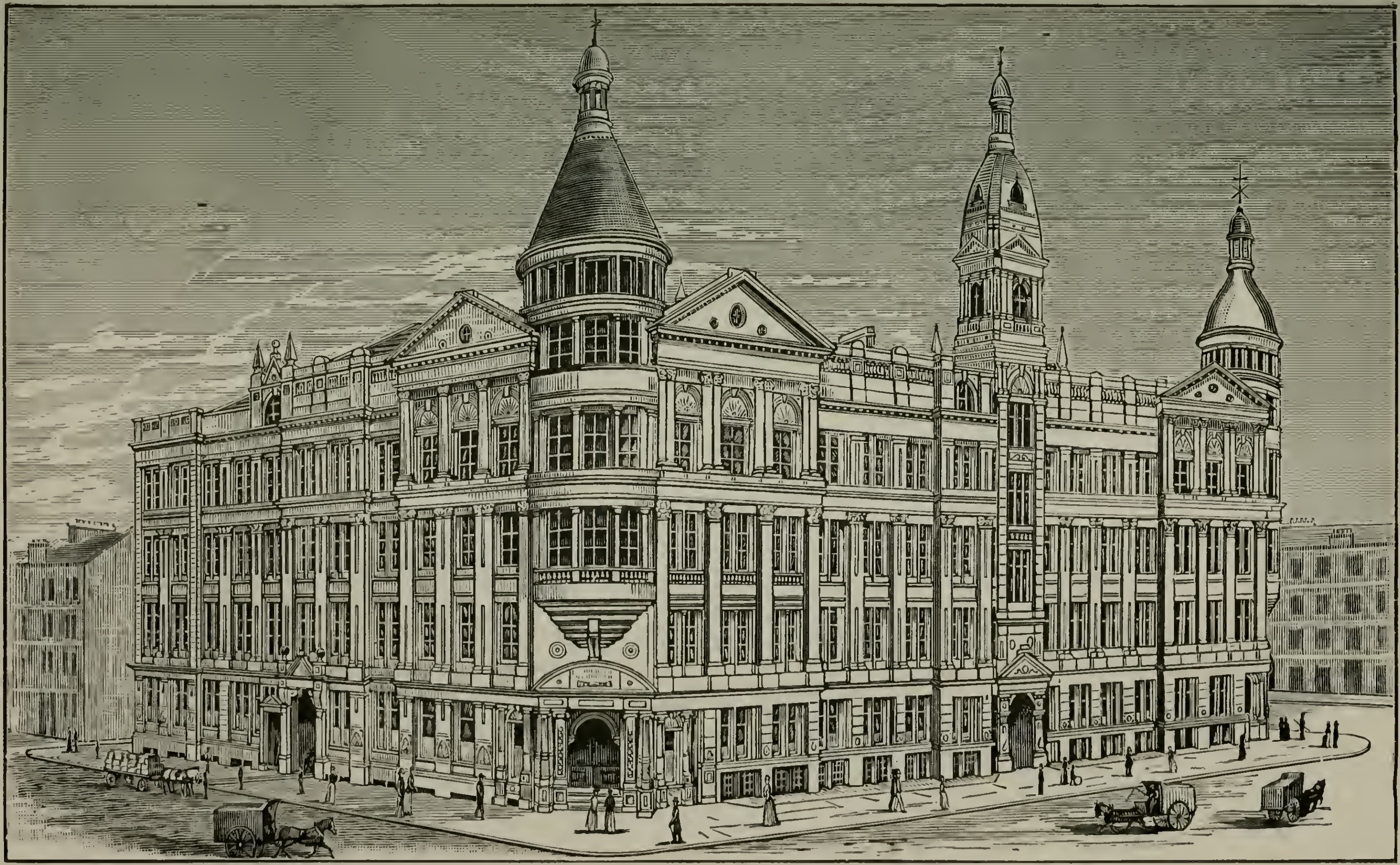
PAGES 112 TO 171.



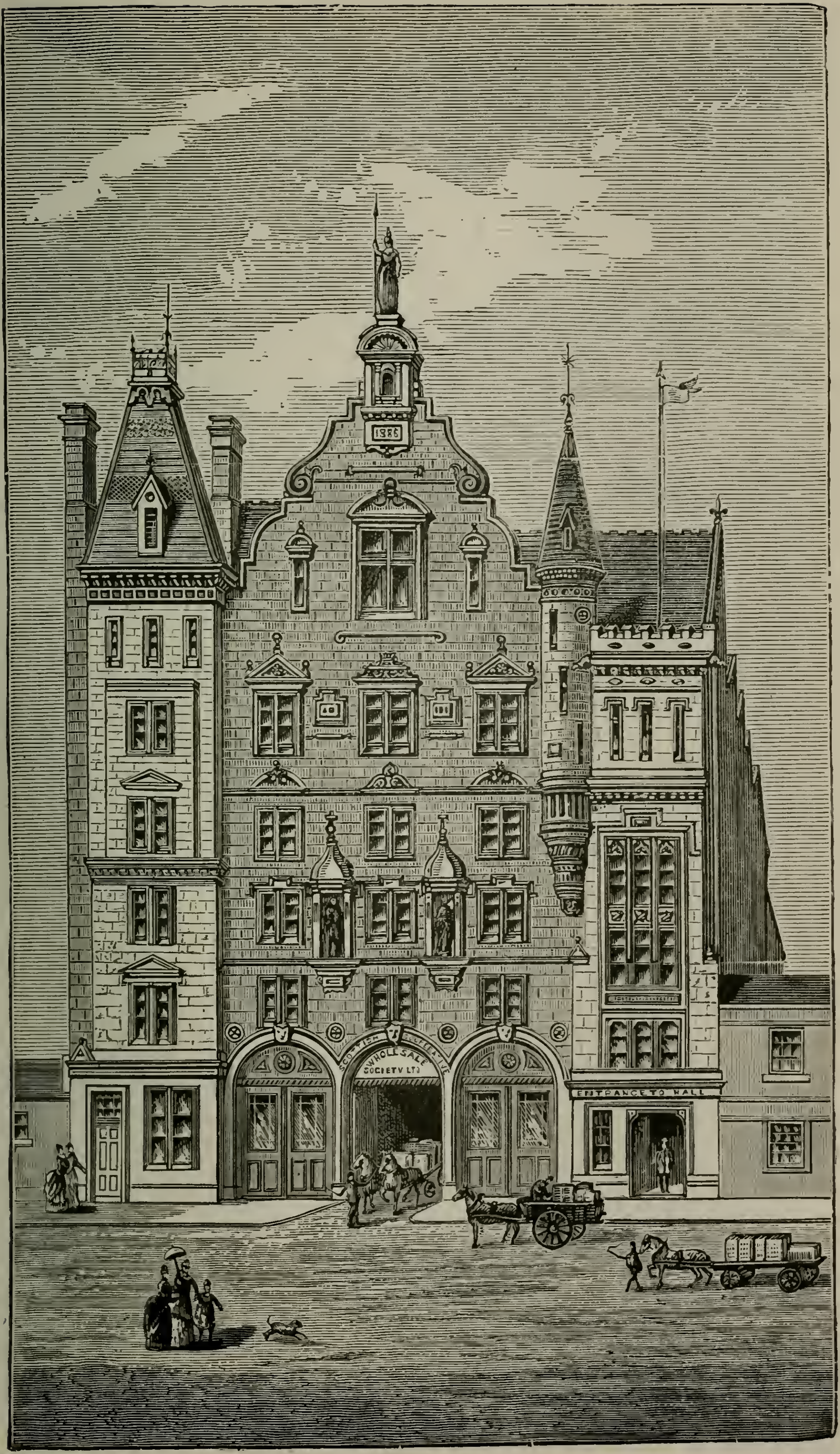
New Central Offices, Morrison Street, Glasgow.



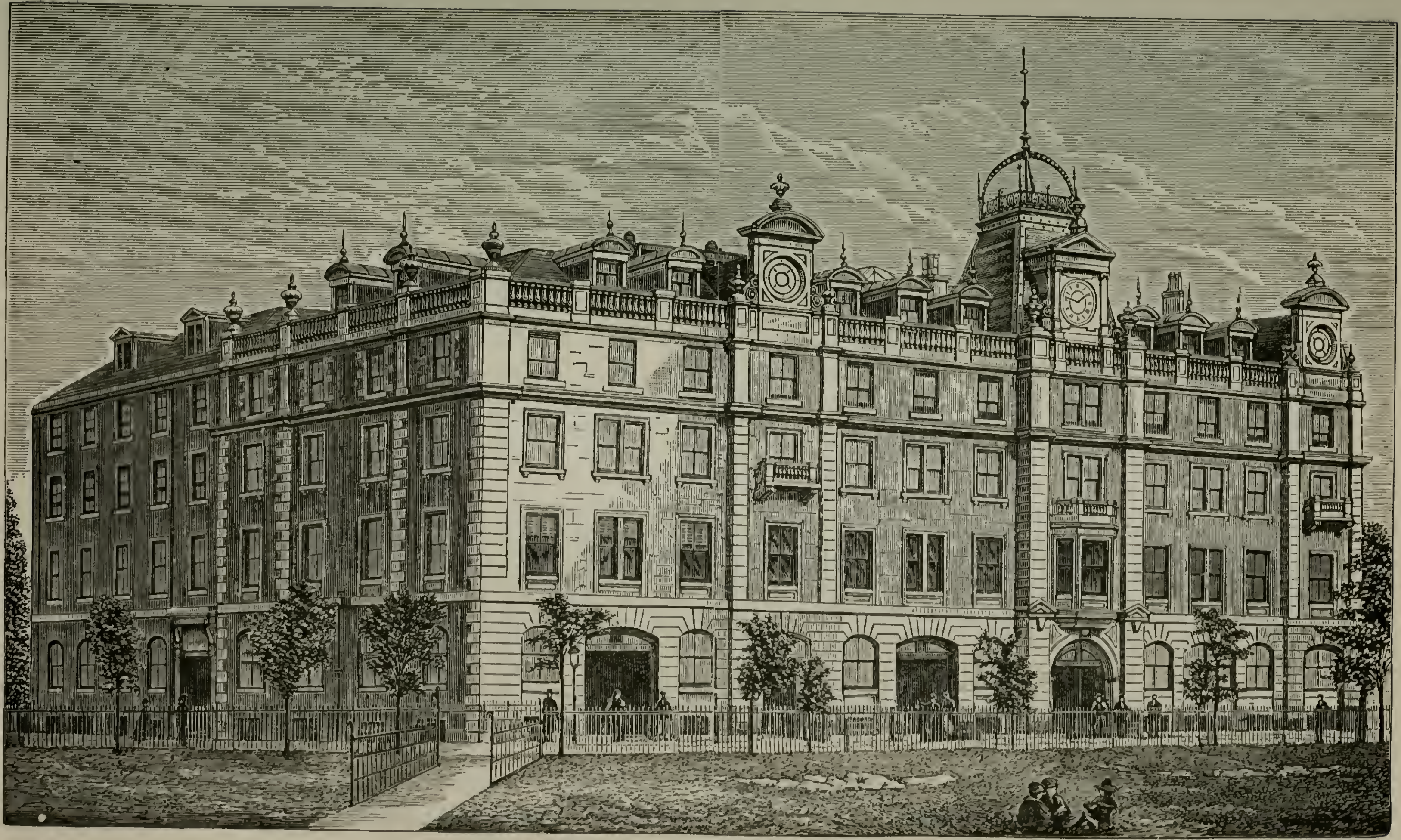
Registered Office, Grocery and Provision Warehouses, 119 Paisley Road, Glasgow.



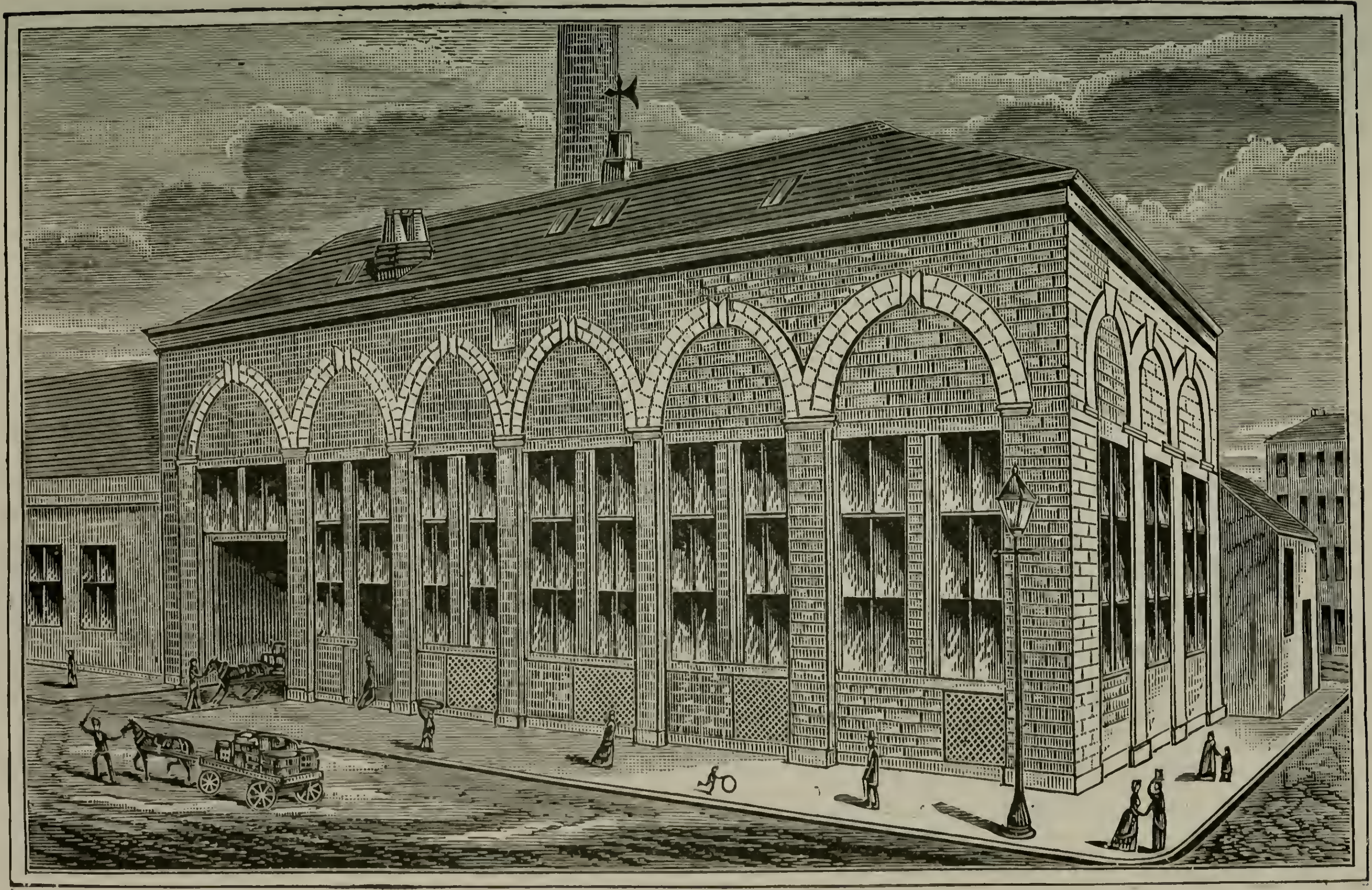
Glasgow Drapery, Boot and Shoe, and Furniture Warehouses, Dundas Street.



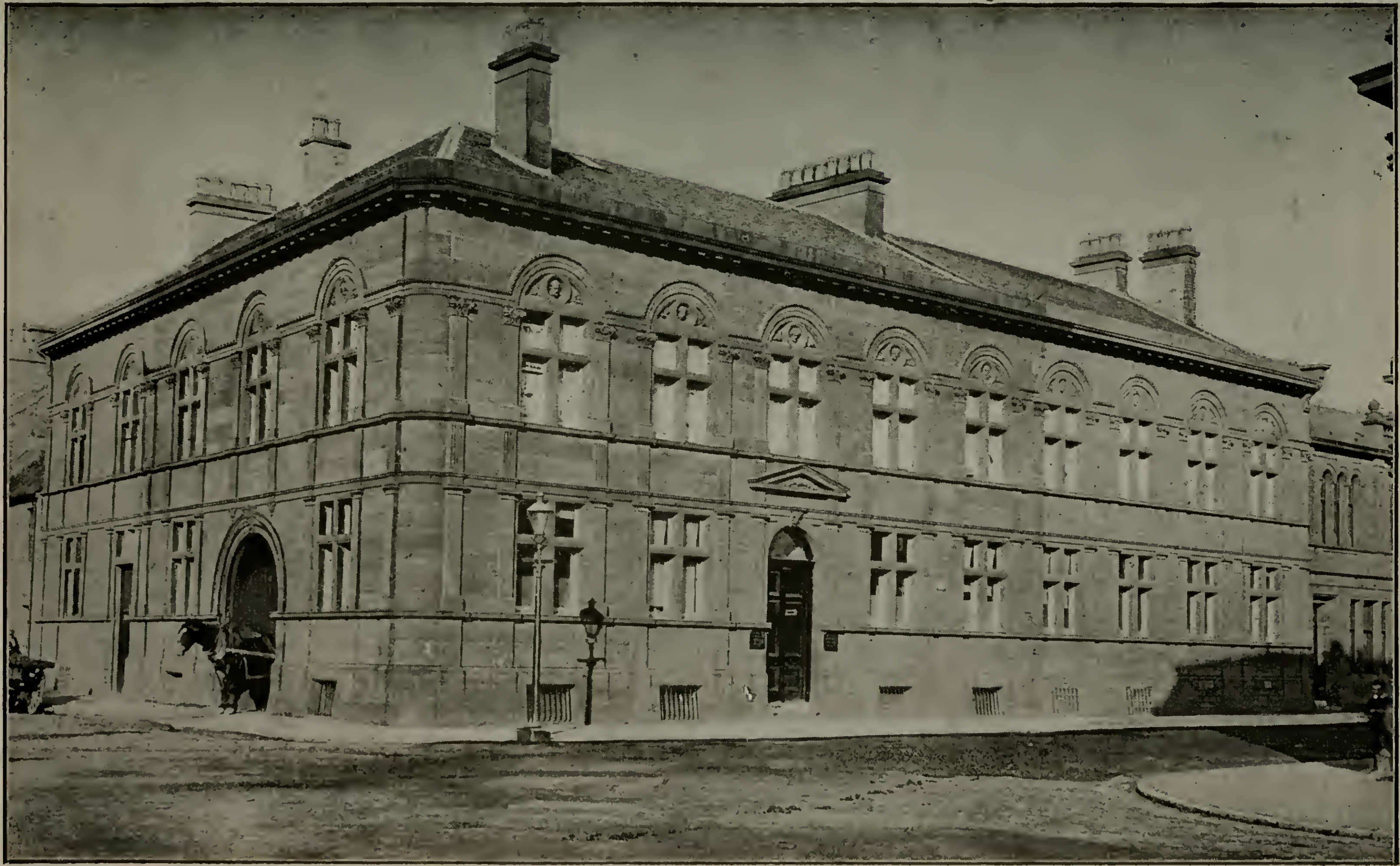
Glasgow Grocery and Provision Warehouse and Hall,
Clarence Street.



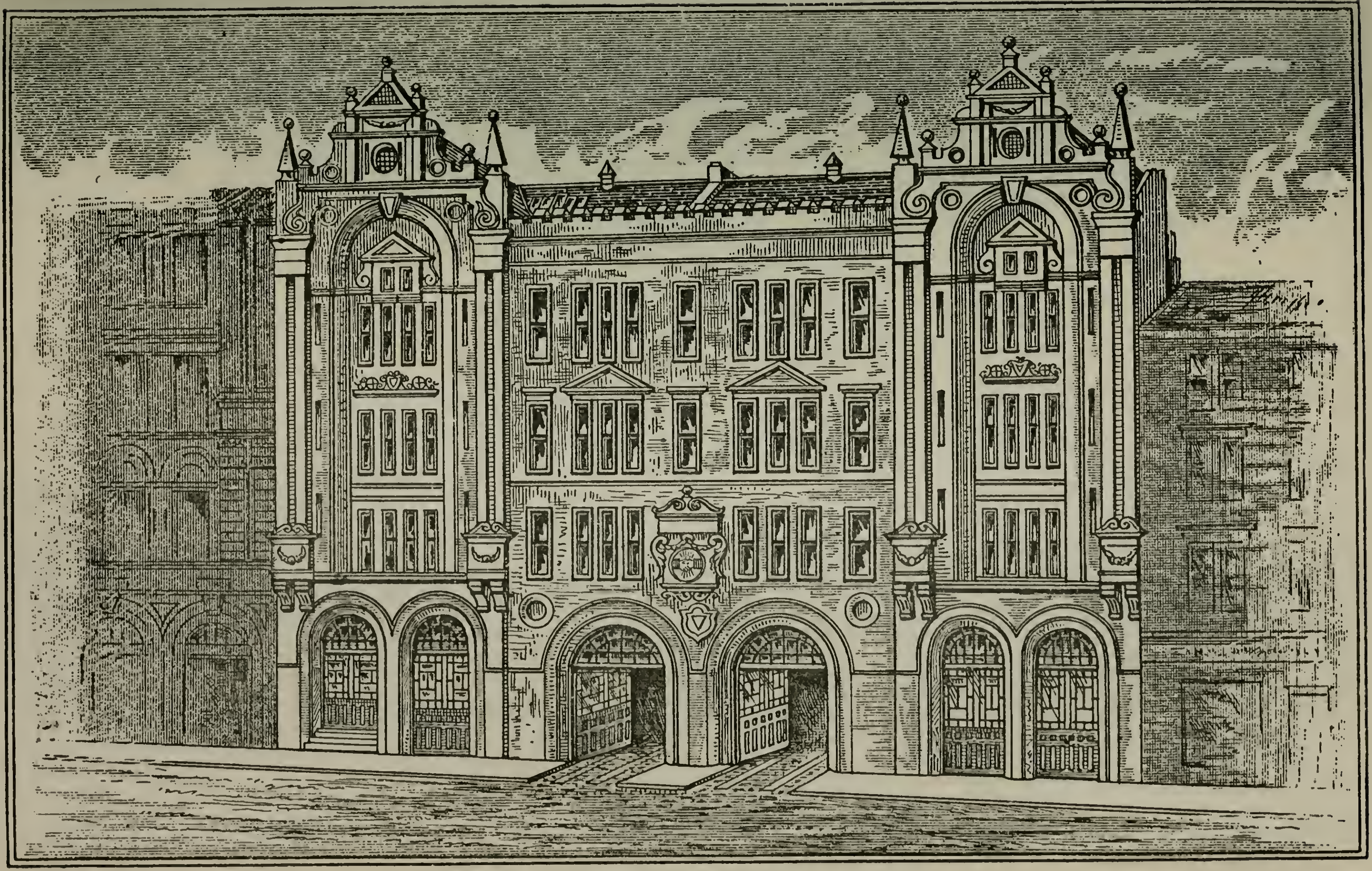
Leith Grocery and Provision Warehouse, Links Place.



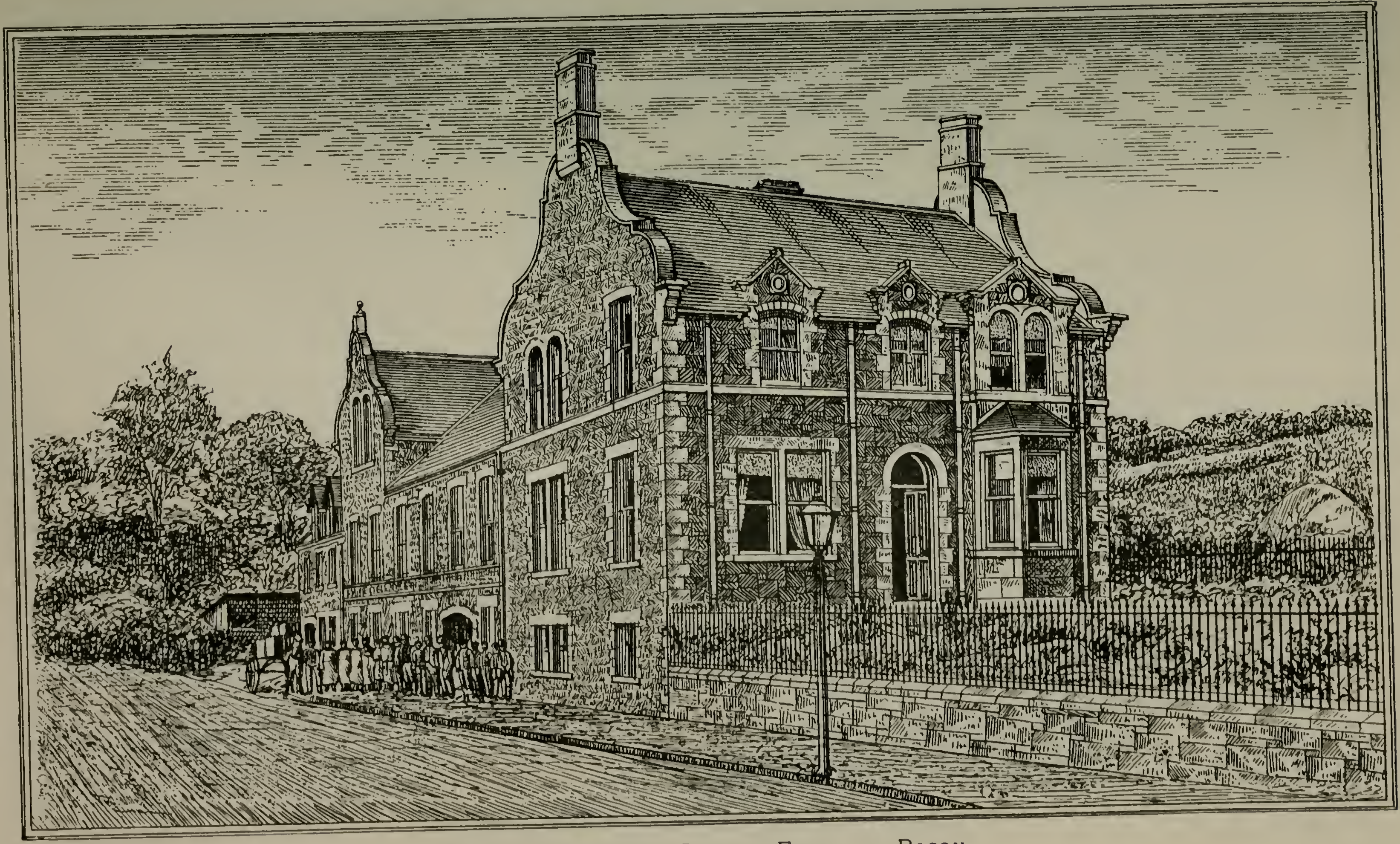
Dundee Grocery and Provision Warehouse, Trades Lane.



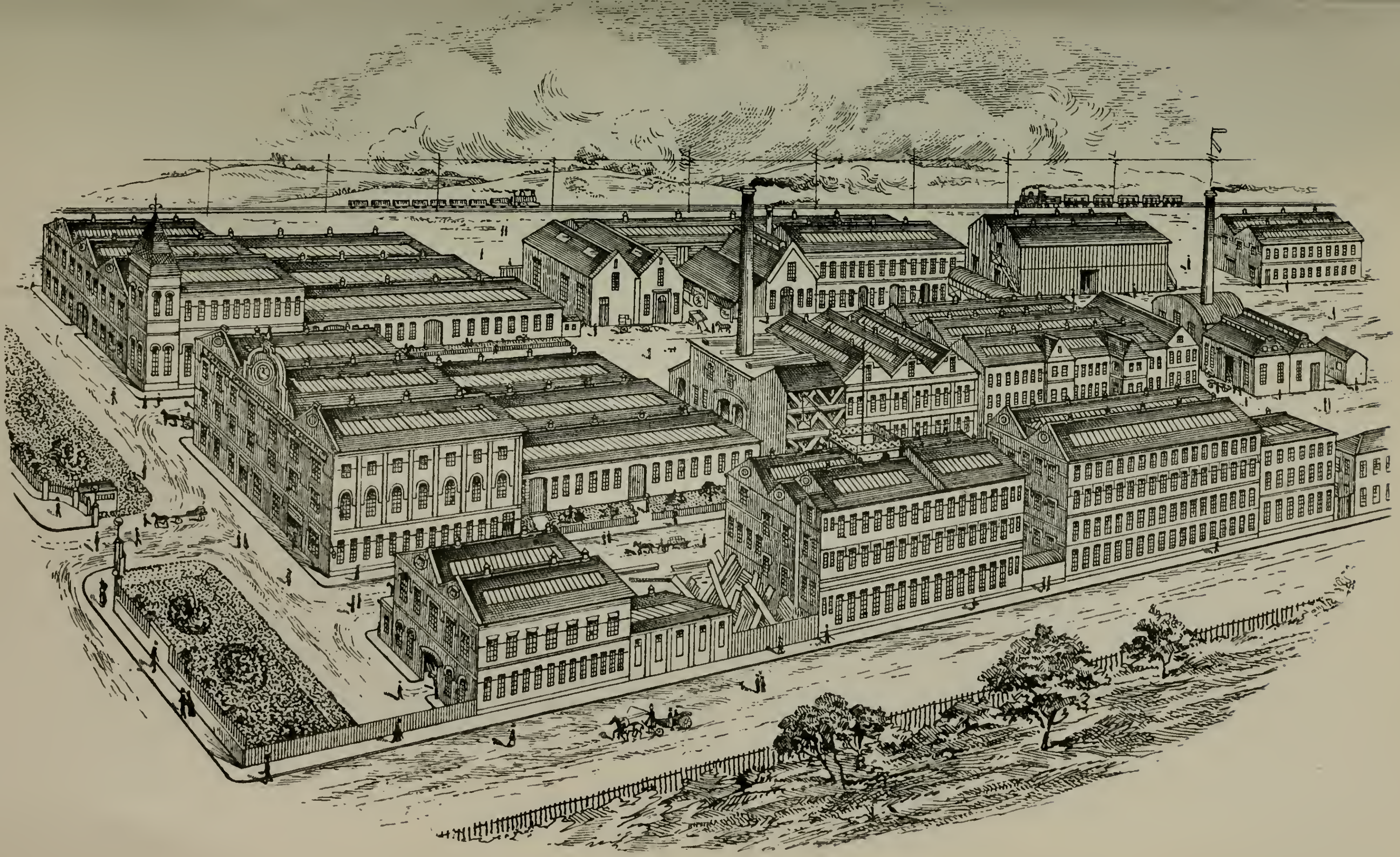
Kilmarnock Grocery and Provision Warehouse, Grange Place.



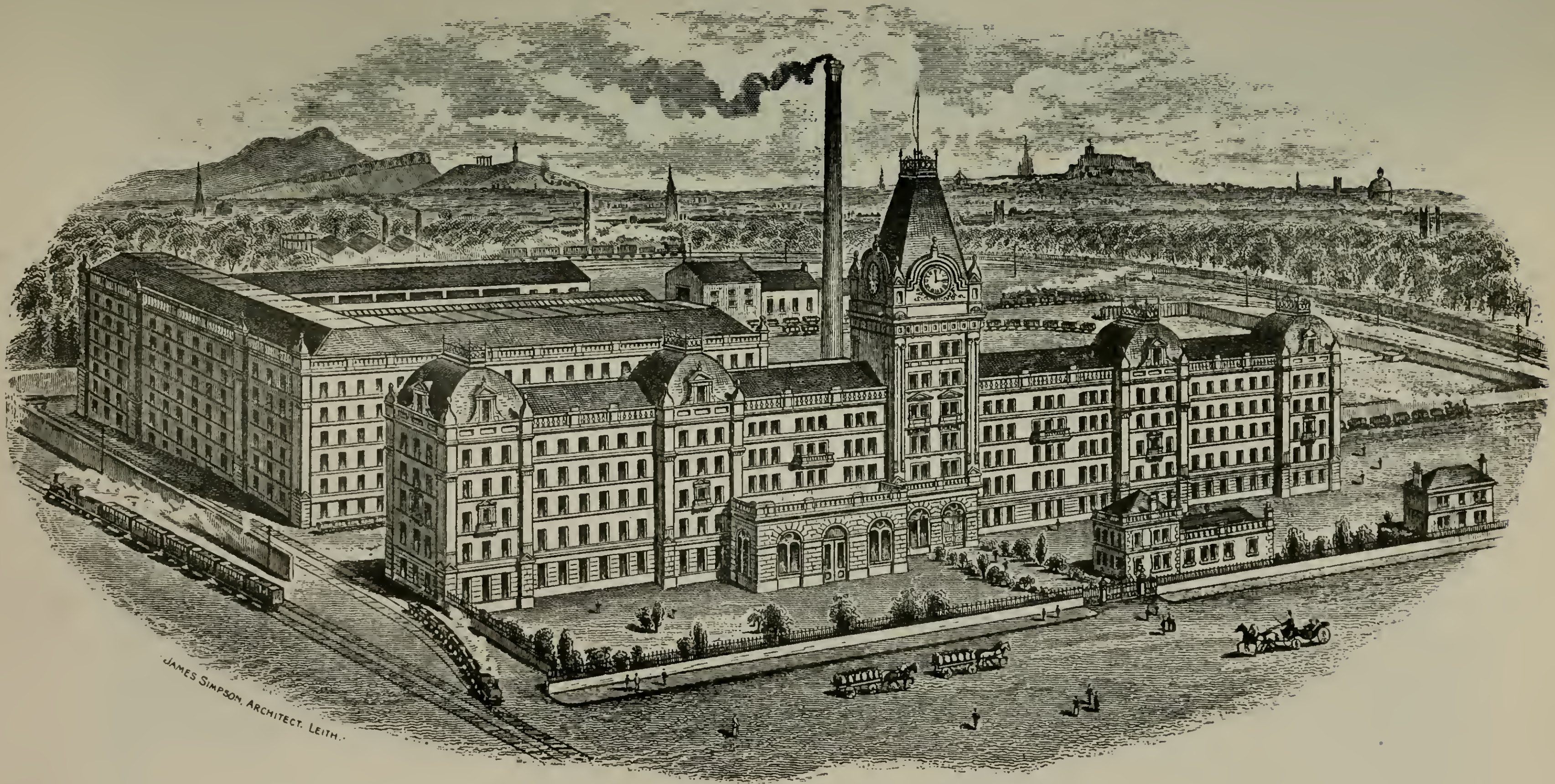
Grocery, &c., Crookston Street, Glasgow.



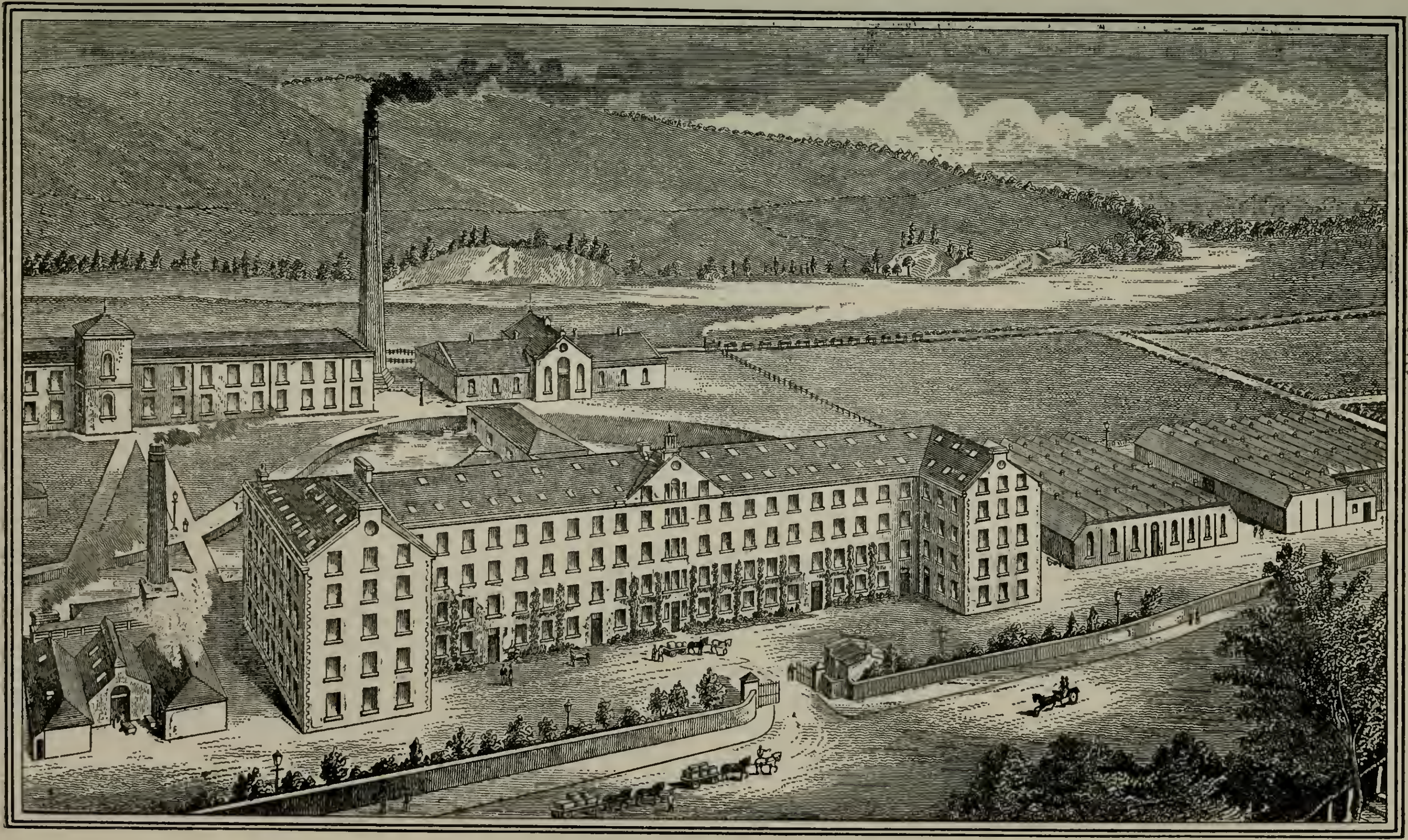
Enniskillen Depot—Butter, Eggs, and Bacon.



Productive Works, Shieldhall, Govan, near Glasgow.


JAMES SIMPSON. ARCHITECT. LEITH.

·CHANCELOT·ROLLER·FLOUR·MILLS.·EDINBURGH, 1891·



Ettrick Tweed Mills, Selkirk.

INTRODUCTION.

AN examination of the statistics in this volume will satisfy our readers that the progress made during 1895-6 has kept pace with the advancement that has been characteristic of the past history of the Society. Every department of the business, and especially the Productive, in spite of, and perhaps to a certain extent in consequence of, the tactics of our opponents, shows a record of unbroken success.

We hope that this new issue of the ANNUAL may prove a profitable as well as an interesting study to its numerous reader, serve to stimulate them to greater loyalty, and make them more steadfast to their principles in word and action.

SCOTTISH CO-OPERATIVE
WHOLESALE SOCIETY LIMITED.

Enrolled 20th April, 1868, under the provisions of the Industrial and Provident Societies Act, 20th August, 1867, 30 and 31 Vict., cap. 117, sec. 4.

Business Commenced 8th September, 1868.

REGISTERED OFFICE, FURNITURE, & STATIONERY WAREHOUSE:
MORRISON STREET, GLASGOW.

GROCERY AND PROVISION WAREHOUSE:
PAISLEY ROAD, GLASGOW.

DRAPERY WAREHOUSE:
DUNDAS AND ST. JAMES' STREETS, GLASGOW.

BOOT AND SHOE WAREHOUSE:
PATERSON AND ST. JAMES' STREETS, GLASGOW.

BOOT AND SHOE FACTORY, CLOTHING FACTORIES, CABINET WORKSHOP, PRINTING WORKSHOP, PRESERVE AND CONFECTION WORKS, COFFEE ESSENCE WORKS, TOBACCO FACTORY, AND PICKLE WORKS:
SHIELDHALL, NEAR GOVAN, GLASGOW.

SCOTTISH

CO-OPERATIVE WHOLESALE SOCIETY

LIMITED.

Branches:

LINKS PLACE, LEITH.
GRANGE PLACE, KILMARNOCK.
TRADES LANE, DUNDEE.
HENRY STREET, ENNISKILLEN, IRELAND.
CHANCELOT ROLLER FLOUR MILLS, CHANCELOT, EDINBURGH.
SOAP WORKS, GRANGEMOUTH.
ETTRICK TWEED MILLS, SELKIRK.

Tea and Coffee Department:

Hooper Square, Leman Street, Whitechapel, London.

Bankers:

THE UNION BANK OF SCOTLAND LIMITED.

Head Offices:

GLASGOW:	LONDON:	EDINBURGH:
Ingram Street.	62, Cornhill, E.C.	George Street.
General Manager:	Manager:	Manager:
ROBERT BLYTH.	JOHN A. FRADGLEY.	HENRY HAY NORIE.

General Committee.

President:

Mr. WILLIAM MAXWELL, 33, Woodburn Terrace, Morningside, Edinburgh.

Secretary:

Mr. ANDREW MILLER, Haldane Cottage, Balcarres Street, Tillicoultry.

Directors:

Mr. DANIEL THOMSON .. 67, Priory Lane, Dunfermline.
Mr. JOHN PEARSON...... Ludgate Place, Alloa.
Mr. ISAAC Mc.DONALD .. 7, Knoxland Street, Dumbarton.
Mr. JOHN ARTHUR ...... 139, George Street, Paisley.
Mr. T. C. Mc.NAB.......... 25, Dalmeny Street, Leith.
Mr. HENRY MURPHY.... Bloomgate, Lanark.
Mr. JOHN ADAMS .... 12, Anderson Street, Kinning Park, Glasgow.
Mr. JOHN STEVENSON .. 5, W. Fullarton Street, Kilmarnock.
Mr. PETER GLASSE...... 3, Myrtle Street, Glasgow.
Mr. THOMAS LITTLE .... 3, Hall Street, Galashiels.

Sub-Committees:

(1) Finance and Property—

Messrs. ADAMS, ARTHUR, LITTLE, and MAXWELL.

Mr. Adams,
Convener Finance.

Mr. Maxwell,
Convener Property.

(2) Grocery: Distributive and Productive—

Messrs. Mc.DONALD, MURPHY, PEARSON, and STEVENSON.

Mr. Mc.Donald,
Convener Distributive.

Mr. Murphy,
Convener Productive.

(3) Drapery and Furnishing: Distributive and Productive—

Messrs. GLASSE, MILLER, Mc.NAB, and THOMSON.

Mr. Thomson,
Convener Distributive.

Mr. Glasse,
Convener Productive.

Auditors:

Mr. JOHN ALEXANDER, Paisley. | Mr. JOHN MILLER, Rutherglen.
Mr. JAMES INGLIS, Paisley.

Officers of the Society.

Manager:

Mr. JAMES MARSHALL, Glasgow.

Accountant:

Mr. ROBERT MACINTOSH, Glasgow.

Cashier:

Mr. ALLAN GRAY, Glasgow.

Buyers, Salesmen, &c.

Grocery and Provision Departments.

Mr. E. ROSS	Glasgow.
Mr. J. MACDONALD	Glasgow.
Mr. JNO. JAMIESON	Glasgow.
Mr. JAS. CALDWELL (Carting Superintendent)	Glasgow.
Mr. W. F. STEWART (Chancelot Roller Flour Mills)	Edinburgh.
Mr. PETER ROBERTSON	Leith.
Mr. WM. Mc.LAREN	Leith.
Mr. W. LAIRD	Kilmarnock.
Mr. DAVID CALDWELL	Kilmarnock.
Mr. J. BARROWMAN	Dundee.
Mr. WILLIAM WHYTE	Enniskillen.
Mr. CHARLES FIELDING (Tea)	London.
Mr. JOHN M'INTYRE (Potatoes)	Glasgow.
Mr. JOHN WHITE (Potatoes)	Leith.
Mr. A. STODDART (Traveller)	Leith.
Mr. GEORGE BLACKWOOD (Traveller, Grocery Department)	Glasgow.
Mr. JNO. KNOX (Traveller, Grocery Department)	Glasgow.
Mr. WM. DUNCAN (Cattle Buyer)	Glasgow.
Mr. ROBT. DEMPSTER (Carbrook Mains Farm)	Larbert.

Mr. DAVID GARDINER (Drapery Department)	Glasgow.
Mr. JAMES MURRAY (Assistant, Drapery Department)	Glasgow.
Mr. ALEX. Mc.FARLANE (Tailoring Factory)	Glasgow.
Mr. ALBERT JOHNSON (Boot and Shoe Factory)	Glasgow.
Mr. WILLIAM MILLER (Furniture Department)	Glasgow.
Mr. DAVID CAMPBELL (Printing)	Glasgow.
Mr. THOMAS HARKNESS (Tobacco Factory)	Glasgow.
Mr. N. ANDERSON (Preserves, &c.)	Glasgow.
Mr. JAMES DAVIDSON (Clerk of Works)	Glasgow.
Mr. JAMES COATS (Mechanics' Department)	Glasgow.
Mr. JOSEPH H. CLAPPERTON (Ettrick Mills)	Selkirk.

Business Arrangements.

Registered Office:
MORRISON STREET, GLASGOW.

Branches:
LINKS PLACE, LEITH; GRANGE PLACE, KILMARNOCK;
TRADES LANE, DUNDEE;
HENRY STREET, ENNISKILLEN, IRELAND;
CHANCELOT ROLLER FLOUR MILLS, EDINBURGH;
HOOPER SQUARE, LEMAN STREET, WHITECHAPEL, LONDON.

BUSINESS ARRANGEMENTS.

Societies or Companies Registered (to *which our trade is strictly confined*) desirous of opening an account with this Society, will please forward a copy of the registered Rules and latest issued balance sheet. If newly started, a statement showing the number of members; value of shares; amount subscribed for and paid up; weekly turnover expected; also, if credit is allowed, the amount per member in proportion to the capital paid up. The information forwarded will be carefully considered, and, if found satisfactory, goods will be supplied on the usual business terms.

CASH PAYMENTS.

Besides the usual invoice sent with each consignment of goods, a weekly statement of accounts (see page 120) is sent to each society, so that there may be no delay in remitting the amount due for the month, the limit of credit allowed by this Society. Interest at the rate of 5 per cent per annum is charged on all overdue accounts, and by a resolution adopted at a general meeting of the members the committee of management are instructed and empowered to examine the books of defaulting societies and take the necessary steps to protect the interest of the federated societies.

BUSINESS NOTICE.

When ordering goods state price or brand of the article wanted, also mode of transit, and name of station to which the goods are to be sent. Orders for the different departments should be written on separate slips. Goods not approved of must be returned at once and intact. No claim for breakage, short weight, &c., can be entertained unless made within six days after goods are received. Delay in delivery should be at once advised.

WEEKLY STATEMENT OF ACCOUNT.

5th Week.
73rd Quarter.

Ledger Folio, 929.
119, Paisley Road,
GLASGOW, *September 3rd, 1887.*

The Grahamston and Bainsford Co-operative Society Limited.

Dr. To The Scottish Co-operative Wholesale Society Limited. Cr.

GOODS.			CASH AND CREDITS.			
Date.	Amount of each Invoice.	Balance last Statement.	Date.	Cash.	Credit.	Totals.
	£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.
		698 7 2				
Aug. 30..	0 4 3	....	Aug. 30..	....	0 5 0	....
,, 30..	18 11 7	....	,, 31..	....	1 0 0	....
,, 30..	29 0 8	....	,, 31..	....	0 12 9	....
,, 30..	32 4 0	....	,, 31..	....	0 12 10	....
,, 30..	0 17 7	....	Sept. 1..	....	0 5 6	....
,, 30..	4 10 0	....	,, 1..	....	0 1 0	....
,, 30..	4 4 0	....	,, 1..	....	1 3 6	....
,, 30..	3 2 6	....	,, 1..	....	2 7 0	....
,, 31..	0 6 6	....	,, 2..	....	0 12 9	....
,, 31..	0 8 3	....	,, 2..	....	0 12 9	....
,, 31..	0 10 10	....	,, 2..	....	0 14 9	....
,, 31..	0 8 3	....	,, 2..	....	0 10 0	....
,, 31..	1 5 0	....	,, 3..	....	0 15 6	....
,, 31..	0 10 11	....	,, 3..	....	10 11 1	....
,, 31..	59 16 9	....	,, 3..	....	0 15 6	....
,, 31..	0 11 3	....	,, 3..	....	1 12 0	....
,, 31..	7 3 5	....				22 11 11
Sept. 1..	2 10 6	....	,, 2..	600 0 0	....	600 0 0
,, 1..	4 17 6	....				
,, 1..	0 15 2	....				
,, 3..	0 6 6	....				
,, 3..	0 9 2	....				
,, 3..	17 10 0	....				
,, 3..	0 18 0	....				
,, 3..	3 10 6	....				
,, 3..	5 13 8	....				
,, 3..	12 11 1	....				
,, 3..	4 18 7	....				
,, 3..	5 3 6	....				
,, 3..	0 12 9	....				
,, 3..	0 1 10	....				
,, 3..	2 14 9	....				
,, 3..	1 8 6	....				
,, 3..	27 12 8	....				
		255 10 5				
	To balance	....			By balance	331 5 8
	£	953 17 7			£	953 17 7

If the above Statement differs from your Books, we shall be glad if you will point out the difference at once.

Terms of Membership.

ADMISSION OF MEMBERS.

The Rules relating to the admission of members are :—

6.—The society shall consist of such co-operative societies registered under the Industrial and Provident Societies Act, 1876, or companies under the Companies Act, 1862 and 1867, or any employé of this society who is over twenty-one years of age, as have been admitted by the Committee, but no society trafficking in intoxicating liquors be eligible for membership in the society, and each admission must be entered in the minute book of the society. Every application for shares must be sanctioned by a resolution of a general meeting of any society or company making such, and the application must be made in the form given in schedule A (see appendix at end of rules), said form to be duly attested by the signature of the president, secretary, and three of the members thereof, and stamped with such society's seal. Every society or company making an application for shares shall state the number of its members, and take up not less than one share for each member, and shall increase the number annually as its members increase, in accordance with its last return to the Registrar ; but no member other than a society registered under the Industrial and Provident Societies Act, 1876, shall hold an interest in the funds exceeding £200. The society shall supply gratis a copy of its rules to each member, immediately after their admission, and to every person on demand at a price not exceeding one shilling.

CAPITAL : HOW PAID UP.

7.—The capital of the society shall be raised in shares of twenty shillings each. Every member, society, or employé, on admission, shall pay the sum of not less than one shilling on each share taken up, and the unpaid portion of the shares may be paid by dividends, or bonus, and interest ; but any member may pay up shares in full or in part at any time. An employé wishing to become a shareholder must apply for not less than five 20s. shares. Fifty shall be the maximum number of shares allowed to each employé.

Application Form.

Whereas, by a resolution of the..............Co-operative Society Limited, passed at a general meeting held on the....day of............, it was resolved to take up........shares (being one share of twenty shillings for each member), said shares being transferable, in the **Scottish Co-operative Wholesale Society Limited**, *and to accept the same on the terms and conditions specified in the Rules. Executed under the seal of the society on the....day of............ Attested by*

.... }
.... } *Three Members.*
.... }

BENEFITS DERIVED FROM MEMBERSHIP.

(*a*) The liability of the member is limited, each member being only responsible for the value of the shares held.

(*b*) Members receive double the rate of dividend on purchases paid to non-members.

(*c*) Share capital is paid 5 per cent per annum.

(*d*) Members have a share in the management of the Wholesale in proportion to the amount of goods bought, as each society has one vote in right of membership, one for the first £1,000 worth of goods bought, and one other additional vote for every complete £2,000 of purchases thereafter.

These advantages, added to the special benefits secured by the leading position of the Wholesale, will, we trust, induce societies as yet non-members to carefully reconsider the question, and take the necessary steps to secure to their members the full benefits of co-operative distribution.

CORRESPONDENCE.

All letters must be addressed to the society, and not to individuals. Addressed envelopes are supplied at cost price. Separate slips ought to be used for the different departments—the Accountant's, Grocery and Provision, Drapery, Boot and Shoe, Furniture. The slips can all be enclosed in the one envelope. Attention to this simple rule will greatly facilitate the despatch of goods and ensure promptitude in answering inquiries; it will also aid in the classification of the letters for reference in any case of irregularity or dispute.

Cash Remittance.

Cheques must be made payable to the Society. If remitted through the Union Bank of Scotland Limited, the usual commission charged will be saved.

LIST OF BRANCHES OF THE UNION BANK OF SCOTLAND
Limited.

Head Offices:—Glasgow, Ingram Street; Edinburgh, George Street.
London Office:—62, Cornhill, E.C.

Branches:

Aberdeen.
Aberdeen, George Street.
,, West End.
Aberfeldy.
Aberlour, Strathspey.
Alloa.
Alva.
Ardrossan.
Auchterarder.
Auchtermuchty.
Ayr.
Ballater.
Banchory.
Banff.
Barrhead.
Barrhill.
Bathgate.
Beith.
Blair-Athole (sub to Pitlochrie).
Blairgowrie.
Braemar.
Brechin.
Bridge of Allan.
Buckie, Banffshire.
Castle-Douglas.
Coatbridge.
Coupar-Angus.
Crieff.
Cullen.
Dalbeattie.
Dalry, Galloway.
Darvel (sub to Galston).
Doune.
Dumbarton.
Dumfries.
Dunblane.
Dundee.
Dunkeld.
Dunning.
Dunoon.
Edinburgh, Forrest Road.
,, Golden Acre.
,, Haymarket.
,, Hunter Square.
,, Lothian Road.
,, Morningside.
,, Newington.
Edinburgh, Norton Park.
,, S. Morningside (sub to Morningside).
Edzell.
Elgin.
Ellon.
Errol.
Fochabers.
Forfar.
Fraserburgh.
Galston.
Gatehouse.
Girvan.
Glasgow, Anderston.
,, Bridgeton Cross.
,, Charing Cross.
,, Cowcaddens.
,, Hillhead.
,, Kinning Park.
,, Maryhill.
,, St. Vincent St.
,, Shawlands.
,, Tradeston.
,, Trongate.
,, Union Street.
Gourock.
Govan.
Greenock.
Hamilton.
Helensburgh.
Huntly.
Inveraray.
Inverness.
Inverurie.
Irvine.
Johnstone.
Keith.
Killin.
Kilmarnock.
Kincardine.
Kirkcaldy.
Kirkwall.
Kirriemuir.
Ladybank.
Largs.
Larkhall.
Leith.
Lerwick.
Leslie.
Lochgelly, Fifeshire.
Lochgilphead.
Macduff.
Maybole.
Mearns (open on Tuesdays and Fridays—sub to Barrhead).
Millport.
Moffat.
Moniaive.
New Aberdour (open on Mondays and Fridays—sub to Rosehearty).
New Pitsligo.
Paisley.
Partick.
Perth.
Peterhead.
Pitlochrie.
Port-Glasgow.
Portsoy.
Renfrew.
Rosehearty.
St. Margaret's Hope, Orkney.
Scalloway, Shetland (open on Tuesdays and Fridays—sub to Lerwick).
Stewarton.
Stirling.
Stonehouse (open on Mondays, Wednesdays, and Fridays—sub to Larkhall).
Strachur, Lochfyne (open on Thursdays—sub to Inveraray).
Stranraer.
Strathaven.
Stromness.
Tarbert, Lochfyne.
Tarland.
Thornhill.
Tillicoultry.
Troon.
Turriff.
Wick.

Statement Showing the Progress of the Society
Date, with Comparisons of

	Year or Quarter ending	Number of Shares Subscribed. Societies.	Number of Shares Subscribed. Employés.	Capital: Includes Share, Loan Reserve, and Insurance Funds.	Net Sales.
				£	£
1st Quarter........	Dec. 7, 1868	..	..	1,795	9,697
1st Year—52 weeks	Dec. 5, 1869	..	..	5,174	81,049
2nd ,, 50 ,,	Nov. 19, 1870	..	..	12,542	105,294
3rd ,, 52 ,,	,, 18, 1871	..	..	18,009	162,658
4th ,, ,, ,,	,, 16, 1872	18,708	..	30,931	262,530
5th ,, ,, ,,	,, 15, 1873	21,271	..	50,433	384,489
6th ,, ,, ,,	,, 14, 1874	24,654	..	48,981	409,947
7th ,, ,, ,,	,, 13, 1875	27,112	..	56,750	430,169
8th ,, 51 ,,	,, 4, 1876	29,008	..	67,218	457,529
9th ,, 52 ,,	,, 3, 1877	31,945	..	72,568	589,221
10th ,, ,, ,,	,, 2, 1878	34,830	..	83,173	600,590
11th ,, ,, ,,	,, 2, 1879	36,008	..	93,076	630,097
12th ,, ,, ,,	Oct. 30, 1880	41,584	..	110,179	845,221
13th ,, ,, ,,	Nov. 5, 1881	49,073	..	135,713	986,646
14th ,, ,, ,,	,, 4, 1882	53,684	..	169,428	1,100,588
15th ,, ,, ,,	,, 3, 1883	59,529	..	195,396	1,253,154
16th ,, ,, ,,	,, 1, 1884	65,331	..	244,186	1,300,331
17th ,, ,, ,,	Oct. 31, 1885	70,066	..	288,945	1,438,220
18th ,, 60 ,,	Dec. 25, 1886	79,874	..	333,658	1.857,152
19th ,, 53 ,,	,, 31, 1887	87,220	..	367,309	1,810,015
20th ,, 52 ,,	,, 29, 1888	96,521	..	409,668	1,963,853
21st ,, ,, ,,	,, 28, 1889	107,004	..	480,622	2,273,782
22nd ,, ,, ,,	,, 27, 1890	117,664	..	575,322	2,475,601
23rd ,, ,, ,,	,, 26, 1891	131,086	..	671,108	2,828,036
24th ,, 53 ,,	,, 31, 1892	139,022	..	778,494	3,104,768
25th ,, 52 ,,	,, 30, 1893	149,164	2,726	869,756	3,135,562
26th ,, ,, ,,	,, 29, 1894	159,820	2,629	940,835	3,056,582
27th ,, ,, ,,	,, 28, 1895	171,985	3,099	1,134,269	3,449,461
110th Quarter........	Mar. 28, 1896	174,130	3,274	1,206,230	868,200
111th ,, ...	June 27, 1896	177,602	3,274	1,184,184	921,062

FROM ITS COMMENCEMENT IN SEPTEMBER, 1868, TILL

SALES AND OTHER INFORMATION.

Gross Total.	Increase on Corresponding Quarter of previous Year.	Rate per cent Increase.	Expenses.	Rate per £ on Sales.	
£	£		£		
..	..	..	153	3·8	1st Quarter.
90,791	..	..	1,035	3·0	1st Year—52 weeks.
196,041	24,155	29·7	1,549	3·5	2nd ,, 50 ,,
358,699	57,408	54·5	2,180	3·2	3rd ,, 52 ,,
621,230	99,872	61·4	3,469	3·1	4th ,, ,, ,,
1,005,719	121,958	46·4	5,055	3·1	5th ,, ,, ,,
1,415,667	25,458	6·6	6,696	3·9	6th ,, ,, ,,
1,845,836	20,222	4·9	7,137	3·9	7th ,, ,, ,,
2,303,365	27,359	6·3	7,540	3·9	8th ,, 51 ,,
2,892,586	131,692	28·7	8,648	3·5	9th ,, 52 ,,
3,493,177	11,369	1·9	10,095	4·0	10th ,, ,, ,,
4,123,275	29,507	4·9	11,117	4·2	11th ,, ,, ,,
4,968,496	215,124	34·1	13,020	3·7	12th ,, ,, ,,
5,955,143	141,424	16·7	15,757	3·8	13th ,, ,, ,,
7,055,732	113,942	11·5	19,686	4·2	14th ,, ,, ,,
8,308,886	152,565	13·8	22,120	4·2	15th ,, ,, ,,
9,609,218	47,177	3·7	24,307	4·5	16th ,, ,, ,,
11,047,438	137,888	10·6	27,314	4·5	17th ,, ,, ,,
12,904,590	418,931	29·1	36,942	4·7	18th ,, 60 ,,
14,714,606	153,965	9·2	35,800	4·7	19th ,, 53 ,,
16,678,460	178,897	10·0	39,411	4·8	20th ,, 52 ,,
18,952,242	309,928	15·7	44,311	4·6	21st ,, ,, ,,
21,427,843	201,819	8·8	49,641	4·8	22nd ,, ,, ,,
24,255,880	352,435	14·2	58,140	4·8	23rd ,, ,, ,,
27,360,648	276,731	9·7	64,905	5·0	24th ,, 53 ,,
30,496,211	30,793	1·0	72,255	5·5	25th ,, 52 ,,
33,552,794	*78,979	*2·5	75,816	5·9	26th ,, ,, ,,
37,002,255	392,878	12·8	79,008	5·4	27th ,, ,, ,,
37,870,455	96,463	12·5	20,601	5·7	110th Quarter.
38,791,518	68,610	8·0	20,863	5·4	111th ,,

* Decrease.

STATEMENT SHOWING THE PROGRESS OF THE SOCIETY

DATE, WITH COMPARISONS OF SALES,

	Year or Quarter ending	Net Profit.	Total Net Profit.	Average Dividend.
		£	£	d.
1st Quarter..........	December 7, 1868..	48	..	..
1st Year—52 weeks..	December 5, 1869..	1,303	1,352	3¼
2nd „ 50 „ ..	November 19, 1870..	2,418	3,770	4¾
3rd „ 52 „ ..	„ 18, 1871..	4,131	7,902	5¼
4th „ „ „ ..	„ 16, 1872..	5,435	13,337	4¾
5th „ „ „ ..	„ 15, 1873..	7,445	20,783	4¾
6th „ „ „ ..	„ 14, 1874..	7,553	28,336	4¼
7th „ „ „ ..	„ 13, 1875..	8,232	36,569	4
8th „ 51 „ ..	„ 4, 1876..	8,836	45,405	4
9th „ 52 „ ..	„ 3, 1877..	10,925	56,330	4
10th „ „ „ ..	„ 2, 1878..	11,968	68,298	4
11th „ „ „ ..	„ 2, 1879..	14,988	83,287	4¾
12th „ „ „ ..	October 30, 1880..	21,685	104,973	6¾
13th „ 53 „ ..	November 5, 1881..	23,981	128,954	6
14th „ 52 „ ..	„ 4, 1882..	23,219	152,174	5½
15th „ „ „ ..	„ 3, 1883..	28,365	180,540	5¾
16th „ „ „ ..	„ 1, 1884..	29,434	209,974	5½
17th „ „ „ ..	October 31, 1885..	39,641	249,616	6¾
18th „ 60 „ ..	December 25, 1886..	50,398	300,014	6½
19th „ 53 „ ..	„ 31, 1887..	47,278	347,293	6¾
20th „ 52 „ ..	„ 29, 1888..	53,538	400,832	6¼
21st „ „ „ ..	„ 28, 1889..	61,756	462,588	6½
22nd „ „ „ ..	„ 27, 1890..	76,545	539,134	7
23rd „ „ „ ..	„ 26, 1891..	89,090	628,225	6¾
24th „ 53 „ ..	„ 23, 1892..	96,027	724,252	6¾
25th „ 52 „ ..	„ 30, 1893..	89,116	813,368	6¼
26th „ „ „ ..	„ 29, 1894..	88,452	901,820	6
27th „ „ „ ..	December 28, 1895..	132,374	1,034,195	7
110th Quarter..........	March 28, 1896..	35,462	1,069,657	7
111th „	June 27, 1896..	45,787	1,115,445	8

FROM ITS COMMENCEMENT IN SEPTEMBER, 1868, TILL

AND OTHER INFORMATION—*continued.*

RESERVE AND INSURANCE FUNDS.			DEPRECIATIONS ALLOWED ON BUILDINGS AND FIXTURES.		
Added.	Withdrawn.	Total Amount.	Amount.	Total Amount.	
£	£	£	£	£	
48	..	..	9	..	1st Quarter.
63	..	112	129	138	1st Year—52 weeks.
324	..	436	111	250	2nd ,, 50 ,,
578	..	1,014	205	455	3rd ,, 52 ,,
471	..	1,485	346	801	4th ,, ,, ,,
355	141	1,700	657	1,439	5th ,, ,, ,,
1,049	104	2,644	784	2,243	6th ,, ,, ,,
338	580	2,402	321	2,565	7th ,, ,, ,,
791	672	2,522	452	3,017	8th ,, 51 ,,
918	343	3,097	485	3,503	9th ,, 52 ,,
721	269	3,549	1,155	4,659	10th ,, ,, ,,
2,215	160	5,606	1,336	5,995	11th ,, ,, ,,
3,134	336	8,404	1,086	7,082	12th ,, ,, ,,
3,086	2,694	8,796	1,653	8,735	13th ,, 53 ,,
3,824	334	12,286	1,688	10,424	14th ,, 52 ,,
3,801	1,530	14,557	2,420	12,844	15th ,, ,, ,,
4,438	1,525	17,471	2,039	14,884	16th ,, ,, ,,
4,393	610	21,254	3,475	18,359	17th ,, ,, ,,
5,628	1,315	25,566	2,980	21,340	18th ,, 60 ,,
8,474	1,389	32,651	3,019	24,360	19th ,, 53 ,,
7,615	3,392	36,874	8,170	32,530	20th ,, 52 ,,
10,244	2,941	44,177	6,284	38,815	21st ,, ,, ,,
10,636	1,931	52,882	6,843	45,659	22nd ,, ,, ,,
12,326	3,362	61,846	11,433	57,092	23rd ,, ,, ,,
17,353	5,052	74,147	10,219	67,311	24th ,, 53 ,,
15,205	4,004	85,348	14,201	81,512	25th ,, 52 ,,
14,839	34,460	65,728	48,404	129,917	26th ,, ,, ,,
16,685	3,782	78,931	35,871	165,788	27th ,, ,, ,,
4,383	1,059	82,255	11,247	177,036	110th Quarter ....
4,688	1,354	85,589	13,674	190,710	111th ,, ...

GROCERY DEPARTMENT, GLASGOW.

YEARLY STATEMENT. SALES, EXPENSES, AND NET PROFIT.

	NET SALES.					Expenses.	Rate per £ of Sales.	Net Profit.	Rate per £ of Sales.	Stocks.
	Drapery and Boots.	Dundee.	Kilmarnock.	Grocery, Glasgow.	Total.					
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	d.	£ s. d.	d.	£
Quarter ending Dec. 7, 1868..	....	....	....	9,697 7 1	9,697 7 1	153 5 4	3·8	48 12 10	1·2	4,648
52 weeks " " 5, 1869..	....	....	....	81,094 2 6	81,094 2 6	1,035 12 8	3·0	1,303 15 0	3·8	5,478
50 " " Nov. 9, 1870..	....	....	....	105,249 12 4	105,249 12 4	1,549 17 2	3·5	2,418 9 2	5·6	9,060
52 " " " 18, 1871..	....	....	....	162,658 7 7	162,658 7 7	2,180 18 3	3·2	4,131 8 6	6·0	14,000
52 " " " 16, 1872..	....	....	....	262,530 19 10	262,530 19 10	3,469 18 4	3·1	5,435 3 9	4·9	21,050
52 " " " 15, 1873..	....	....	....	384,489 4 0	384,489 4 0	5,055 15 7	3·1	7,445 19 1	4·5	24,510
52 " " " 14, 1874..	....	....	....	409,947 7 9	409,947 7 9	6,696 14 2	3·9	7,553 5 2	4·4	24,700
52 " " " 13, 1875..	....	....	....	430,169 7 11	430,169 7 11	7,137 15 5	3·9	8,232 11 6	4·5	29,400
51 " " " 4, 1876..	42,952 0 10	....	....	414,576 19 6	457,529 0 4	7,540 2 8	3·9	8,836 2 3	4·6	39,550
52 " " " 3, 1877..	50,654 14 2	....	....	507,582 14 4	558,237 8 6	8,196 19 7	3·5	10,443 15 6	4·4	39,510
52 " " " 2, 1878..	56,480 17 7	....	....	467,342 1 0	523,822 18 7	8,976 5 4	4·1	10,289 0 10	4·7	40,130
52 " " " 2, 1879..	60,046 3 9	....	....	481,949 12 2	541,995 15 11	9,832 8 6	4·3	12,625 11 3	5·5	50,400
52 " " Oct. 30, 1880..	83,856 9 10	....	....	615,601 5 5	699,457 15 3	10,880 2 11	3·7	17,908 0 6	6·0	43,190
53 " " Nov. 5, 1881..	102,157 0 11	11,121 15 7	....	679,534 6 4	792,813 2 10	12,930 11 8	3·9	18,439 1 3	5·5	63,380
6 months " May 6, 1882..	53,190 8 0	10,385 14 5	12,982 1 4	336,413 13 0	412,971 16 9	8,080 8 7	4·4	8,270 16 9	4·8	61,920
6 " " Nov. 4, 1882..	....	....	....	383,834 1 3	383,834 1 3	5,299 13 4	3·3	7,539 19 0	4·7	34,620
52 weeks " " 3, 1883..	....	....	....	776,681 1 5	776,681 1 5	10,940 9 4	3·3	15,350 8 9	4·7	38,374
52 " " " 1, 1884..	....	....	....	759,443 11 7	759,443 11 7	11,152 5 4	3·5	14,281 1 1	4·5	30,081
52 " " Oct. 31, 1885..	....	....	....	761,889 7 11	761,889 7 11	11,881 1 0	3·7	16,187 18 9	5·0	28,130
60 " " Dec. 25, 1886..	....	....	....	936,030 19 0	936,030 19 0	14,481 16 4	3·7	19,073 6 9	4·9	37,450
53 " " " 31, 1887..	....	....	....	895,560 6 4	895,560 6 4	13,163 8 7	3·5	20,351 5 3	5·4	56,095
52 " " " 29, 1888..	....	....	....	972,790 2 2	972,790 2 2	14,435 1 0	3·5	23,399 9 11	5·7	44,610
52 " " " 28, 1889..	....	....	....	1,148,832 5 5	1,148,832 5 5	16,190 9 8	3·4	27,930 15 8	5·8	56,000
52 " " " 27, 1890..	....	....	....	1,223,450 16 3	1,223,450 16 3	17,406 17 10	3·4	30,380 13 7	5·9	63,000
52 " " " 26, 1891..	....	....	....	1,419,722 0 0	1,419,722 0 0	20,141 6 3	3·4	34,714 5 7	5·8	87,400
53 " " " 31, 1892..	....	....	....	1,559,700 3 6	1,559,700 3 6	22,698 10 2	3·5	35,225 3 0	5·4	86,860
52 " " " 30, 1893..	....	....	....	1,574,712 13 5	1,574,712 13 5	25,180 11 4	3·8	36,446 12 8	5·5	88,705
52 " " " 29, 1894..	....	....	....	1,482,218 19 4	1,482,218 19 4	25,939 15 11	4·2	33,831 4 9	5·4	70,955
52 " " " 28, 1895..	....	....	....	1,670,916 7 8	1,670,916 7 8	26,587 13 0	3·8	49,578 12 3	7·1	80,424
13 " " Mch. 28, 1896..	....	....	....	435,152 1 8	435,152 1 8	6,994 2 3	3·8	13,337 10 10	7·3	79,375
13 " " June 27, 1896..	....	....	....	443,684 9 3	443,684 9 3	6,853 3 6	3·7	13,211 16 9	7·1	77,673
Totals..........	449,337 15 1	21,507 10 0	12,982 1 4	21,793,466 6 11	22,277,293 13 4	343,063 1 0	3·7	514,221 17 11	5·5	....

GROCERY DEPARTMENT, LEITH.

YEARLY STATEMENT, SHOWING SALES, EXPENSES, AND NET PROFIT.

	Net Sales.			Expenses.			Rate per £ of Sales.	Net Profit.			Rate per £ of Sales.	Amount of Stock.
	£	s.	d.	£	s.	d.	d.	£	s.	d.	d.	£
Year ending November 3, 1877—52 weeks....	30,984	0	9	451	17	0	3·5	481	12	9	3·7	4,590
,, ,, ,, 2, 1878 ,, ,, ...	76,767	11	1	1,119	10	4	3·5	1,679	0	11	5·2	3,000
,, ,, ,, 1, 1879 ,, ,, ...	88,101	15	11	1,284	16	8	3·5	2,363	8	3	6·4	6,480
,, ,, October 30, 1880 ,, ,, ...	145,764	0	3	2,140	6	2	3·5	3,777	4	2	6·2	8,410
,, ,, November 5, 1881—53 ,, ...	193,833	10	10	2,826	11	8	3·5	5,542	7	9	6·8	13,400
,, ,, ,, 4, 1882—52 ,, ...	205,728	16	3	2,927	11	2	3·4	4,895	11	9	5·7	14,890
,, ,, ,, 3, 1883 ,, ,, ...	255,160	2	2	3,488	17	9	3·2	6,093	19	3	5·7	20,045
,, ,, ,, 1, 1884 ,, ,, ...	281,509	2	4	3,992	8	2	3·4	6,935	10	4	5·9	16,250
,, ,, October 31, 1885 ,, ,, ...	363,664	7	11	5,031	1	8	3·3	10,572	0	8	6·9	29,750
,, ,, December 25, 1886—60 ,, ...	496,240	13	8	7,160	19	5	3·4	12,452	11	4	6·0	24,000
,, ,, ,, 31, 1887—53 ,, ...	496,673	11	8	7,256	5	4	3·5	13,217	13	3	6·3	42,420
,, ,, ,, 29, 1888—52 ,, ...	536,600	10	6	7,971	7	4	3·5	14,112	13	9	6·3	31,080
,, ,, ,, 28, 1889 ,, ,, ...	584,617	12	1	8,381	3	1	3·4	13,525	12	9	5·5	35,750
,, ,, ,, 27, 1890 ,, ,, ...	602,908	9	5	8,371	5	10	3·3	15,031	4	6	5·9	34,600
,, ,, ,, 26, 1891 ,, ,, ...	693,179	13	10	9,825	7	8	3·4	18,421	11	10	6·4	42,820
,, ,, ,, 31, 1892—53 ,, ...	737,663	6	4	10,317	18	1	3·3	17,767	8	10	5·7	41,050
,, ,, ,, 30, 1893—52 ,, ...	757,569	9	10	10,935	4	7	3·4	15,898	18	7	5·0	52,409
,, ,, ,, 29, 1894 ,, ,, ...	706,466	3	9	10,718	5	3	3·6	16,488	12	2	5·6	33,464
,, ,, ,, 28, 1895 ,, ,, ...	751,550	19	7	10,531	15	8	3·3	22,885	11	2	7·3	31,647
Quarter ending March 28, 1896—13 ,, ...	191,624	16	5	2,775	13	5	3·4	4,850	7	3	6·1	36,051
,, ,, June 27, 1896 ,, ,, ...	188,190	15	10	2,821	19	8	3·6	4,822	14	11	6·1	31,610
Totals..................	8,384,799	10	5	120,330	5	11	3·4	211,815	16	2	6·0	

QUARTERLY STATEMENT, GROCERY DEPARTMENT, KILMARNOCK.—FROM DATE OF KEEPING A SEPARATE ACCOUNT.

Quarter ending	Net Sales.			Expenses.			Rate per £ of Sales.	Net Profit.			Rate per £ of Sales.	Stocks.
	£	s.	d.	£	s.	d.	d.	£	s.	d.	d.	£
August 5, 1882	6,594	0	5	190	15	1	7·0	163	7	8	6·0	535
November 4, 1882	8,849	10	3	221	7	8	6·0	137	9	1	3·7	1,550
February 3, 1883	9,894	13	1	245	18	11	5·9	362	11	7	8·7	2,320
May 5, 1883	10,192	13	4	236	7	10	5·5	472	3	0	11·1	2,120
August 4, 1883	7,979	7	10	245	14	8	7·3	238	4	11	7·1	720
November 3, 1883	11,625	19	8	225	0	1	4·6	176	13	6	3·6	1,663
February 2, 1884	8,446	16	2	217	1	5	6·1	123	10	4	3·5	2,898
May 3, 1884	9,492	2	9	197	12	5	4·9	162	2	9	4·0	1,781
August 2, 1884	9,145	12	11	208	15	8	5·4	114	15	5	3·0	963
November 1, 1884	12,989	5	11	198	7	11	3·7	235	6	3	4·2	2,812
January 31, 1885	10,094	9	8	204	18	3	4·8	69	14	9	1·6	2,521
May 2, 1885	8,874	3	9	159	14	3	4·3	258	5	9	6·9	1,750
August 1, 1885	8,644	2	7	192	11	6	5·3	102	4	1	2·8	1,132
October 31, 1885	14,012	17	7	208	14	3	3·5	534	12	2	9·1	2,300
January 30, 1886	9,461	10	4	204	13	0	5·2	295	13	5	7·5	2,010
May 1, 1886	9,439	14	11	177	13	5	4·5	289	7	4	7·3	1,600
July 31, 1886	9,434	7	4	193	15	8	4·9	264	10	0	6·7	760
*December 25, 1886	23,129	5	10	309	3	2	3·2	908	16	9	9·4	2,070
March 26, 1887	11,129	13	7	170	3	9	3·6	364	3	8	7·8	2,615
June 25, 1887	9,928	13	5	189	4	9	4·5	255	7	8	6·1	1,525
September 24, 1887	15,469	2	4	221	10	8	3·4	895	18	3	13·6	1,070
†December 31, 1887	16,152	2	11	245	9	8	4·2	758	15	6	11·2	2,585
March 31, 1888	11,715	9	7	179	9	8	4·0	328	8	3	6·7	2,850
June 30, 1888	13,539	14	3	202	10	10	3·6	379	15	5	6·7	2,410
September 29, 1888	13,946	14	7	218	14	2	3·8	23	10	11	0·4	2,329
December 29, 1888	15,162	13	11	229	9	1	3·6	324	10	8	5·1	3,200
March 30, 1889	10,597	0	5	178	4	0	4·0	178	19	2	4·0	2,080
June 29, 1889	11,538	7	6	216	13	3	4·5	102	6	9	2·1	2,600
September 28, 1889	14,378	11	7	224	18	1	3·7	406	12	5	6·8	1,420

* Twenty-one weeks. † Fourteen weeks.

Quarterly Statement, Grocery Department, Kilmarnock—*continued.*

Quarter ending	Net Sales.			Expenses.			Rate per £ of Sales.	Net Profit.			Rate per £ of Sales.	Stocks.
	£	s.	d.	£	s.	d.	d.	£	s.	d.	d.	£
December 28, 1889	17,926	18	8	233	2	5	3·1	623	11	11	8·3	2,910
March 29, 1890	12,361	8	6	194	12	5	3·7	560	3	8	10·8	2,040
June 28, 1890	13,618	4	4	275	0	3	4·8	563	8	7	9·9	1,050
September 27, 1890	14,223	6	2	199	8	3	3·3	550	8	9	9·2	190
December 27, 1890	16,807	11	3	246	2	10	3·5	972	15	1	13·8	2,400
March 28, 1891	14,162	9	0	222	13	6	3·7	685	3	1	11·6	1,480
June 27, 1891	14,804	7	6	274	11	7	4·4	609	2	3	9·8	2,000
September 26, 1891	16,299	14	11	264	15	11	3·8	620	3	7	9·1	1,170
December 26, 1891	22,168	2	4	327	1	2	3·5	875	2	0	9·5	2,225
March 26, 1892	16,745	1	7	276	11	9	3·9	1,070	6	5	15·3	2,400
June 25, 1892	15,327	12	8	315	14	3	4·9	786	7	3	12·3	2,440
September 24, 1892	17,342	12	1	335	16	11	4·6	358	10	10	4·9	2,070
†December 31, 1892	23,251	16	11	374	11	5	3·8	897	7	7	9·2	2,000
April 1, 1893	17,353	1	8	305	15	3	4·2	658	4	6	9·1	2,070
July 1, 1893	15,298	10	11	339	9	7	5·3	298	14	7	4·6	1,985
September 30, 1893	17,856	2	9	371	12	1	4·9	438	0	5	5·8	1,840
December 30, 1893	20,351	19	6	411	12	1	4·8	782	16	4	9·2	1,850
March 31, 1894	18,471	14	6	394	9	5	5·1	534	4	2	6·9	2,570
June 30, 1894	17,108	10	6	400	14	8	5·6	623	10	7	8·7	1,890
September 29, 1894	17,723	14	11	407	3	10	5·5	‡337	17	2	4·5	1,540
December 29, 1894	21,701	16	6	437	16	7	4·8	1,273	17	4	14·0	2,370
March 30, 1895	20,133	13	0	419	6	3	5·0	889	13	2	10·6	2,945
June 29, 1895	17,831	14	10	418	13	7	5·6	405	4	8	5·4	2,515
September 28, 1895	19,055	18	0	449	8	11	5·6	440	19	4	5·5	1,210
December 28, 1895	22,051	6	7	432	6	2	4·7	1,053	0	4	11·4	2,030
March 28, 1896	18,192	2	1	433	19	2	5·6	817	0	0	10·7	1,912
June 27, 1896	17,443	19	2	434	15	8	6·0	517	17	9	7·1	1,221
Totals	807,472	9	3	15,311	19	0	4·5	26,485	14	5	7·8	....

† Fourteen weeks. ‡ Loss.

QUARTERLY STATEMENT, GROCERY DEPARTMENT, DUNDEE.—From Date of keeping a Separate Account.

Quarter ending	Net Sales.			Expenses.			Rate per £ of Sales.	Net Profit.			Rate per £ of Sales.	Net Loss.			Rate per £ of Sales.	Stocks.
	£	s.	d.	£	s.	d.	d.	£	s.	d.	d.	£	s.	d.	d.	£
August 5, 1882..	6,328	4	0	237	2	11	8·8	....			..	126	19	9	4·8	1,204
November 4, 1882..	7,180	12	3	207	17	9	7·0	....			..	98	12	7	3·3	1,475
February 3, 1883..	8,513	10	1	217	6	4	6·1	67	12	4	1·8	....			..	1,040
May 5, 1883..	8,583	16	3	226	13	4	6·3	96	1	7	2·7	....			..	1,080
August 4, 1883..	9,050	6	4	245	1	3	6·5	5	15	3	0·1	....			..	1,923
November 3, 1883..	8,533	5	8	218	11	2	6·1	71	2	5	2·0	....			..	2,455
February 2, 1884..	9,278	1	10	235	12	9	6·1	88	14	11	2·2	....			..	2,250
May 3, 1884..	10,943	14	6	252	16	9	5·6	181	7	10	4·0	....			..	1,975
August 2, 1884..	12,648	2	11	262	11	10	5·0	260	9	7	4·9	....			..	2,950
November 1, 1884..	13,776	3	6	275	12	6	4·8	73	16	8	1·3	....			..	2,690
January 31, 1885..	12,080	7	2	291	8	8	5·8	111	1	3	2·2	....			..	1,080
May 2, 1885..	13,424	7	0	242	12	6	4·3	189	3	2	3·4	....			..	1,950
August 1, 1885..	14,930	3	3	251	12	1	4·0	359	16	4	5·8	....			..	2,940
October 31, 1885..	15,685	3	4	271	7	11	4·2	348	15	2	5·3	....			..	2,890
January 30, 1886..	12,248	16	9	248	12	8	4·8	238	13	5	4·6	....			..	1,300
May 1, 1886..	13,616	12	9	283	8	7	5·0	86	11	2	1·5	....			..	2,670
July 31, 1886..	14,912	1	10	265	7	11	4·2	205	17	7	3·3	....			..	3,250
*December 25, 1886..	22,975	17	8	397	17	9	4·1	348	8	3	3·7	....			..	2,600
March 26, 1887..	13,916	4	6	244	6	5	4·2	163	5	0	2·8	....			..	1,885
June 25, 1887..	13,810	2	11	241	9	2	4·2	210	10	3	3·6	....			..	3,050
September 24, 1887..	15,064	15	6	265	8	7	4·2	212	6	11	3·4	....			..	3,020
†December 31, 1887..	16,231	4	0	281	14	4	4·2	279	17	11	4·2	....			..	3,210
March 31, 1888..	12,205	12	7	246	11	4	4·8	286	9	8	5·6	....			..	2,770
June 30, 1888..	14,865	19	7	262	6	11	4·2	154	19	5	2·5	....			..	3,740
September 29, 1888..	14,857	13	3	281	9	7	4·5	253	8	2	4·1	....			..	5,370
December 29, 1888..	15,323	1	0	284	8	1	4·4	321	3	11	5·0	....			..	2,710
March 30, 1889..	16,415	11	3	256	13	3	3·7	245	2	6	3·5	....			..	3,230

* Twenty-one weeks. † Fourteen weeks.

June 29, 1889..	20,090 11 2	286 1 0	3·4	618 7 4	7·3	....	..	5,940
September 28, 1889..	19,022 12 6	295 18 4	3·7	60 4 11	0·7	....	..	4,590
December 28, 1889..	17,987 11 8	284 1 6	3·7	206 9 7	2·7	....	..	4,150
March 29, 1890..	15,713 6 7	274 19 11	4·2	244 7 7	3·7	....	..	3,420
June 28, 1890..	16,324 16 0	288 16 9	4·2	244 8 2	3·6	....	..	3,590
September 27, 1890..	18,593 3 6	321 13 11	4·1	290 8 8	3·7	....	..	5,390
December 27, 1890..	16,411 8 5	303 8 0	4·4	364 2 5	5·3	....	..	4,070
March 28, 1891..	19,284 18 2	322 10 5	4·0	282 12 10	3·5	....	..	4,070
June 27, 1891..	19,673 16 4	313 17 9	3·8	309 10 10	3·7	....	..	5,200
September 26, 1891..	21,683 3 1	310 16 4	3·4	458 0 11	5·0	....	..	4,360
December 26, 1891..	19,207 14 2	296 1 6	3·7	338 8 8	4·2	....	..	3,550
March 26, 1892..	21,503 7 8	290 18 2	3·2	390 5 0	4·3	....	..	3,500
June 25, 1892..	22,669 4 1	314 3 2	3·3	251 1 8	2·6	....	..	4,660
September 24, 1892..	24,100 0 1	354 16 8	3·5	464 9 11	4·7	....	..	7,940
†December 31, 1892..	23,459 3 2	314 3 2	3·2	553 0 11	5·8	....	..	3,990
April 1, 1893..	21,282 4 1	299 13 0	3·3	453 10 4	5·1	....	..	2,970
July 1, 1893..	24,031 11 5	313 9 1	3·1	606 6 8	6·0	....	..	5,280
September 30, 1893..	23,872 2 1	310 0 1	3·1	511 9 8	5·1	....	..	3,730
December 30, 1893..	23,682 9 9	317 2 7	3·2	658 12 7	6·9	....	..	2,900
March 31, 1894..	21,590 11 5	305 17 0	3·4	593 13 6	6·6	....	..	2,704
June 30, 1894..	23,132 16 7	308 3 0	3·2	629 8 7	6·5	....	..	4,377
September 29, 1894..	24,272 16 2	333 9 7	3·2	599 1 7	5·9	....	..	3,380
December 29, 1894..	20,739 17 2	366 0 9	3·5	547 8 3	6·3	....	..	2,214
March 30, 1895..	21,641 16 11	288 17 1	3·2	483 1 9	5·3	....	..	1,670
June 29, 1895..	24,223 17 1	319 7 5	3·1	614 15 4	6·0	....	..	2,812
September 28, 1895..	25,330 0 9	316 4 10	2·9	639 7 8	6·0	....	..	2,505
December 28, 1895..	25,149 4 6	303 14 10	2·9	553 2 5	5·3	....	..	2,260
March 28, 1896..	26,174 2 4	325 12 6	3·0	656 16 4	6·0	....	..	2,450
June 27, 1896..	26,815 8 0	327 0 6	3·0	675 18 1	6·0	....	..	2,743
Totals..	975,030 6 6	15,943 1 2	3·9	18,159 2 10	..	225 12 4	..	..
				225 12 4	..			
				17,933 10 6	4·4			

† Fourteen weeks.

QUARTERLY STATEMENT, DRAPERY DEPARTMENT.—FROM DATE OF KEEPING A SEPARATE ACCOUNT.

Quarter ending	Net Sales.												Expenses.			Rate per £ of Sales.	Net Profit.			Rate per £ of Sales.	Stocks.
	Boots.			Furniture.			Drapery.			Total.											
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	£	s.	d.	£	£
August 5, 1882 ..	8,351	15	0	2,693	6	11	21,144	6	11	32,189	8	10	1,123	9	9	8·4	1,171	8	2	8·7	28,560
Nov. 4, 1882 ..	9,267	11	10	2,057	1	11	25,587	12	9	36,912	6	6	1,356	1	2	8·8	1,308	6	6	8·7	34,030
Feb. 3, 1883 ..	7,520	4	4	2,280	17	3	22,301	14	3	32,102	15	10	1,409	11	3	10·5	967	14	0	7·2	33,260
May 5, 1883 ..	8,159	0	7	1,904	14	4	25,682	6	9	35,746	1	8	1,438	12	11	9·6	1,090	8	2	7·3	31,231
August 4, 1883 ..	9,368	12	4	3,045	1	9	23,937	10	11	36,351	5	0	1,447	8	1	9·5	1,284	12	4	8·5	31,253
Nov. 3, 1883 ..	9,658	4	3	2,518	11	10	30,562	12	8	42,739	8	9	1,534	9	3	8·6	1,807	4	8	10·1	32,281
Feb. 2, 1884 ..	8,944	16	1	2,994	17	9	26,445	3	8	38,384	17	6	1,588	18	8	9·9	1,605	11	5	10·0	33,192
May 3, 1884 ..	9,782	13	2	2,307	11	1	30,463	14	9	42,553	19	0	1,666	5	8	9·4	1,591	16	7	9·0	36,065
August 2, 1884 ..	10,981	0	10	4,595	4	10	28,337	2	6	43,913	8	2	1,731	9	9	9·4	1,717	4	10	9·3	35,784
Nov. 1, 1884 ..	10,884	13	3	2,887	1	9	34,034	16	0	47,806	11	0	1,827	15	5	9·1	1,899	14	5	9·5	39,661
Jan. 31, 1885 ..	....			....			30,267	3	3	30,267	3	3	1,290	0	9	10·2	1,319	11	1	10·1	31,084
May 2, 1885 ..	....			....			37,153	15	9	37,153	15	9	1,414	15	11	9·1	1,492	17	7	9·6	32,340
August 1, 1885 ..	....			....			33,578	12	7	33,578	12	7	1,438	19	0	10·2	1,211	0	11	8·7	31,020
Oct. 31, 1885 ..	....			....			39,994	14	4	39,994	14	4	1,547	6	10	9·2	1,847	0	5	11·0	35,990
Jan. 30, 1886 ..	....			....			33,029	17	3	33,029	17	3	1,554	9	2	11·2	1,216	7	10	9·0	33,150
May 1, 1886 ..	....			....			44,570	17	11	44,570	17	11	1,641	9	6	8·8	1,709	19	3	9·2	36,340
July 31, 1886 ..	....			....			42,129	5	5	42,129	5	5	1,705	8	3	9·7	1,801	11	5	10·3	40,100
*Dec. 25, 1886 ..	....			....			75,835	10	10	75,835	10	10	3,362	6	4	10·6	3,983	5	11	12·6	45,740
March 26, 1887 ..	....			....			40,647	13	5	40,647	13	5	2,028	12	8	11·9	1,248	2	8	7·3	47,670
June 25, 1887 ..	....			....			50,432	4	9	50,432	4	9	2,081	15	1	9·9	2,185	17	1	10·4	42,170
Sept. 24, 1887 ..	....			....			47,697	15	3	47,697	15	3	2,065	14	10	10·3	2,234	6	10	11·2	45,870
†Dec. 31, 1887 ..	....			....			55,420	13	10	55,420	13	10	2,294	1	9	10·0	2,487	10	2	10·7	41,400
March 31, 1888 ..	....			....			48,630	9	0	48,630	9	0	2,176	17	7	10·7	1,661	14	11	8·2	48,645
June 30, 1888 ..	....			....			56,216	13	4	56,216	13	4	2,257	18	4	9·6	2,175	16	9	9·2	43,240
Sept. 29, 1888 ..	....			....			57,138	9	11	57,138	9	11	2,324	4	0	9·7	2,186	15	11	9·2	50,050
Dec. 29, 1888 ..	....			....			56,928	16	6	56,928	16	6	2,486	11	6	10·4	2,057	16	3	8·6	47,990
March 30, 1889 ..	....			....			55,006	13	0	55,006	13	0	2,493	3	11	10·8	2,294	3	2	10·0	54,600

* Twenty-one weeks. † Fourteen weeks.

June 29, 1889 ..	....	....	64,163 10 4	64,163 10 4	2,645 6 9	9·9	3,167 18 6	11·8	50,900
Sept. 28, 1889 ..	....	....	67,747 18 7	67,747 18 7	2,776 1 7	9·8	2,707 18 0	9·5	64,600
Dec. 28, 1889 ..	....	....	74,256 1 8	74,256 1 8	2,887 18 9	9·3	3,230 4 0	10·4	58,800
March 29, 1890 ..	....	....	71,632 4 4	71,632 4 4	2,997 12 3	10·0	3,297 1 4	11·0	72,080
June 28, 1890 ..	....	....	81,166 2 4	81,166 2 4	3,306 17 9	9·7	3,416 9 5	10·1	62,200
Sept. 27, 1890 ..	....	....	82,909 0 0	82,909 0 0	3,597 19 6	10·4	3,400 5 8	9·8	74,620
Dec. 27, 1890 ..	....	....	90,353 10 7	90,353 10 7	3,709 0 1	9·8	4,456 19 3	11·8	64,000
March 28, 1891 ..	....	....	75,469 2 3	75,469 2 3	3,915 7 4	12·4	2,738 0 2	8·7	78,000
June 27, 1891 ..	....	....	87,041 2 1	87,041 2 1	4,101 15 7	11·3	3,088 16 11	8·5	70,100
Sept. 26, 1891 ..	....	....	87,043 18 2	87,043 18 2	4,030 16 4	11·1	3,269 6 3	9·0	80,980
Dec. 26, 1891 ..	....	....	100,331 15 2	100,331 15 2	4,091 11 4	9·7	4,716 18 9	11·2	69,970
March 26, 1892 ..	....	....	90,987 12 0	90,987 12 0	4,312 4 7	11·3	3,410 19 8	9·0	84,400
June 25, 1892 ..	....	....	100,312 14 3	100,312 14 3	4,375 13 0	10·4	4,331 15 8	10·3	77,810
Sept. 24, 1892 ..	....	....	97,495 2 3	97,495 2 3	4,541 0 1	11·1	4,141 16 5	10·2	85,680
†Dec. 31, 1892 ..	....	....	112,572 7 1	112,572 7 1	4,838 11 9	10·3	5,132 1 9	10·9	79,420
April 1, 1893 ..	....	....	92,117 12 4	92,117 12 4	4,708 2 4	12·2	2,895 2 10	7·5	90,050
July 1, 1893 ..	....	....	94,045 12 6	94,045 12 6	4,793 14 5	12·2	3,645 10 11	9·3	85,269
Sept. 30, 1893 ..	....	....	103,764 6 9	103,764 6 9	5,078 19 6	11·7	4,204 13 9	9·7	90,033
Dec. 30, 1893 ..	....	....	102,613 8 2	102,613 8 2	4,950 13 3	11·5	3,824 19 5	8·9	81,459
March 31, 1894 ..	....	....	99,436 13 4	99,436 13 4	5,131 13 5	12·4	2,937 12 1	7·1	88,312
June 30, 1894 ..	....	....	104,784 14 0	104,784 14 0	5,276 10 0	12·0	4,033 18 10	9·2	83,201
Sept. 29, 1894 ..	....	....	102,180 18 3	102,180 18 3	5,356 18 6	12·5	3,463 9 7	8·1	89,089
Dec. 29, 1894 ..	....	....	113,241 0 11	113,241 0 11	5,185 12 8	10·9	4,787 0 6	10·1	77,012
March 30, 1895 ..	....	....	109,852 12 5	109,852 12 5	5,505 8 3	12·0	2,793 5 11	6·1	82,726
June 29, 1895 ..	....	....	117,549 19 10	117,549 19 10	5,635 5 6	11·5	4,656 12 4	9·5	81,329
Sept. 28, 1895 ..	....	....	129,982 5 4	129,982 5 4	5,843 17 3	10·7	5,217 1 4	9·6	95,661
Dec. 28, 1895 ..	....	....	136,734 9 0	136,734 9 0	5,659 14 5	9·9	6,669 15 7	11·7	103,971
March 28, 1896 ..	....	....	119,190 18 7	119,190 18 7	6,015 15 7	12·1	3,668 11 2	7·4	114,532
June 27, 1896 ..	....	....	134,363 14 11	134,363 14 11	6,175 19 8	11·0	5,233 15 5	9·3	114,526
Totals	92,918 11 8	27,284 9 5	3,916,516 14 11	4,036,719 16 0	180,733 18 9	10·7	160,096 0 8	9·5	....

† Fourteen weeks.

QUARTERLY STATEMENT, BOOT AND SHOE DEPARTMENT.

FROM DATE OF KEEPING A SEPARATE ACCOUNT.

Quarter ending	Net Sales.			Expenses.			Rate per £ of Sales.	Net Profit.			Rate per £ of Sales.	Stocks.
	£	s.	d.	£	s.	d.		£	s.	d.		£
January 31, 1885	10,188	11	5	290	18	9	6·8	596	3	8	14·0	5,990
May 2, 1885	12,549	19	5	353	2	4	6·7	608	18	9	11·6	5,530
August 1, 1885	16,185	10	11	429	16	10	6·4	777	3	8	11·5	9,400
October 31, 1885	16,542	18	4	529	0	6	7·6	499	12	2	7·2	11,520
January 30, 1886	14,120	7	6	549	9	11	9·3	460	5	6	7·8	11,200
May 1, 1886	16,190	5	3	556	12	0	8·3	560	19	3	8·3	11,130
July 31, 1886	16,467	16	11	538	0	6	7·9	585	11	5	8·5	11,490
*December 25, 1886	28,856	18	8	980	7	10	8·2	942	0	7	7·8	15,500
March 25, 1887	14,242	19	10	602	18	11	10·1	256	19	6	4·3	14,150
June 25, 1887	18,416	14	3	602	10	3	7·8	616	6	6	8·0	13,185
September 24, 1887	17,259	16	10	598	15	6	8·2	310	11	7	4·3	14,730
†December 31, 1887	20,704	14	9	736	4	10	8·3	605	2	9	7·0	15,490
March 31, 1888	16,373	12	5	669	10	7	10·1	153	9	6	2·3	15,630
June 30, 1888	19,721	3	3	652	6	7	8·0	389	16	3	4·7	11,710
September 29, 1888	19,657	10	9	705	7	2	8·6	464	2	1	5·6	13,300
December 29, 1888	22,183	2	7	781	13	8	8·4	424	2	5	4·7	15,390
March 30, 1889	18,000	17	5	751	17	11	10·0	240	2	8	3·2	14,680
June 29, 1889	24,306	1	9	873	14	1	8·6	589	8	9	5·8	15,070
September 28, 1889	22,671	17	3	872	5	2	9·2	441	5	7	4·7	18,000
December 28, 1889	26,200	2	6	893	19	7	8·2	720	13	3	6·6	16,950
March 29, 1890	22,593	13	8	900	17	4	9·5	444	10	10	4·7	16,420
June 28, 1890	28,847	19	5	1,022	19	8	8·5	885	16	10	7·4	16,560
September 27, 1890	29,285	17	2	929	3	8	7·7	888	6	1	7·2	15,650
December 27, 1890	31,008	16	11	958	18	0	7·4	1,012	6	5	7·8	14,360
March 28, 1891	27,090	17	3	988	0	7	8·7	889	8	2	7·8	14,930

* Twenty-one weeks. † Fourteen weeks.

QUARTERLY STATEMENT, BOOT AND SHOE DEPARTMENT—*continued.*

Quarter ending	Net Sales.			Expenses.			Rate per £ of Sales.	Net Profit.			Rate per £ of Sales.	Stocks.
	£	s.	d.	£	s.	d.		£	s.	d.		£
June 27, 1891	34,702	19	11	1,040	19	8	7·2	1,292	6	11	8·9	17,050
September 26, 1891	33,273	16	8	1,019	3	9	7·3	1,238	11	2	8·9	14,800
December 26, 1891	37,424	1	0	1,097	15	8	7·0	1,515	18	10	9·7	17,470
March 26, 1892	29,028	13	5	1,088	15	7	9·0	1,009	4	2	8·3	17,630
June 25, 1892	39,526	1	10	1,230	1	10	7·4	1,645	17	8	9·9	16,760
September 24, 1892	35,601	10	8	1,200	1	5	8·1	1,208	12	7	8·1	16,650
†December 31, 1892	42,902	19	10	1,387	11	9	7·7	1,906	4	3	10·6	20,490
April 1, 1893	32,874	3	1	1,352	1	5	9·8	1,084	0	1	7·9	21,480
July 1, 1893	43,534	17	11	1,742	5	2	9·6	1,442	18	6	7·9	25,747
September 30, 1893	36,008	15	2	1,771	7	0	11·8	883	16	4	5·8	25,372
December 30, 1893	41,348	0	6	1,871	15	6	10·8	1,145	6	1	6·6	29,188
March 31, 1894	31,803	19	0	1,890	8	9	13·0	743	5	0	5·0	27,095
June 30, 1894	46,030	15	0	1,898	3	1	9·9	1,126	12	10	5·9	24,974
September 29, 1894	31,833	2	10	1,880	16	10	12·9	592	16	6	4·0	28,874
December 29, 1891	41,641	12	0	1,947	9	5	10·4	1,154	13	1	6·2	31,096
March 30, 1895	37,839	2	0	1,963	12	10	12·4	539	0	3	3·4	31,105
June 29, 1895	53,632	11	11	2,087	11	2	9·3	1,519	1	9	6·8	26,774
September 28, 1895	43,355	4	10	1,972	0	10	10·9	1,296	18	6	7·1	33,051
December 28, 1895	52,810	18	10	2,062	8	5	9·4	1,568	3	11	7·1	34,754
March 28, 1896	41,351	11	8	1,993	14	10	11·5	991	11	5	5·7	23,735
June 27, 1896	58,636	2	5	2,021	10	3	8·2	2,211	5	9	9·0	24,369
Totals	1,363,832	6	11	52,288	7	4	9·2	40,479	9	9	7·1	....

† Fourteen weeks.

QUARTERLY STATEMENT, FURNITURE AND FURNISHING DEPARTMENT.

FROM DATE OF KEEPING A SEPARATE ACCOUNT.

Quarter ending	Net Sales.			Expenses.			Rate per £ of Sales.	Net Profit.			Rate per £ of Sales.	Stocks.
	£	s.	d.	£	s.	d.	d.	£	s.	d.	d.	£
January 31, 1885	3,022	18	2	210	11	11	16·7	81	13	3	6·4	3,500
May 2, 1885	2,636	9	6	262	5	10	23·8	‡4	17	11	0·4	4,410
August 1, 1885	7,200	12	9	392	6	7	13·0	221	4	9	7·4	4,620
October 31, 1885	5,599	11	1	420	1	5	18·0	133	3	10	5·6	5,600
January 20, 1886	6,744	8	11	445	7	4	15·8	145	4	10	5·2	6,180
May 1, 1886	7,026	7	0	470	18	2	16·0	195	9	8	6·4	7,020
July 31, 1886	9,621	1	11	500	9	6	12·4	410	10	0	10·2	7,650
*December 25, 1886	13,157	12	1	914	4	7	16·6	292	9	7	5·4	7,400
March 25, 1887	7,315	11	8	577	14	1	18·9	160	16	8	5·2	8,750
June 25, 1887	11,033	17	4	590	17	11	12·8	641	14	4	13·9	9,290
September 24, 1887	8,567	19	0	618	12	4	17·3	323	12	11	9·0	9,570
†December 31, 1887	11,956	12	7	723	6	11	14·5	677	17	2	13·6	9,150
March 31, 1888	8,295	17	1	667	6	7	19·3	311	7	10	9·0	10,370
June 30, 1888	12,865	9	6	738	3	6	13·9	735	16	7	13·9	10,540
September 29, 1888	9,876	13	4	780	1	6	18·9	245	16	0	5·9	10,000
December 29, 1888	12,582	11	8	860	10	4	16·4	412	16	5	7·8	10,820
March 30, 1889	9,970	0	8	814	4	1	19·6	285	2	3	6·8	11,990
June 29, 1889	15,812	15	7	918	7	0	13·9	762	19	10	7·5	11,170
September 28, 1889	12,451	19	0	905	16	2	17·4	625	14	2	12·0	10,380
December 28, 1889	16,871	0	8	930	18	5	13·2	916	2	10	13·0	10,450
March 29, 1890	14,418	6	7	926	4	4	15·4	567	11	8	9·4	11,410
June 28, 1890	21,501	17	11	1,045	3	0	11·6	1,339	5	4	14·9	11,150
September 27, 1890	18,076	15	11	1,103	5	1	15·3	1,287	13	10	17·0	12,240
December 27, 1890	22,149	13	4	1,261	10	4	13·6	1,504	10	0	16·2	13,600
March 28, 1891	15,095	13	8	1,287	17	7	20·4	557	8	2	8·8	15,700

* Twenty-one weeks. † Fourteen weeks. ‡ Loss.

QUARTERLY STATEMENT, FURNITURE AND FURNISHING DEPARTMENT—*continued.*

Quarter ending	Net Sales.			Expenses.			Rate per £ of Sales.	Net Profit.			Rate per £ of Sales.	Stocks.
	£	s.	d.	£	s.	d.	d.	£	s.	d.	d.	£
June 27, 1891	25,335	18	11	1,412	1	8	13·3	1,323	6	11	12·5	16,350
September 26, 1891	19,759	6	0	1,384	18	2	16·8	1,138	9	3	13·8	16,520
December 26, 1891	24,953	4	7	1,471	7	10	14·1	1,026	0	6	9·9	16,400
March 26, 1892	18,157	8	11	1,492	1	11	19·7	410	18	11	5·4	18,330
June 25, 1892	27,834	1	5	1,578	10	5	13·6	1,368	12	10	11·8	16,600
September 24, 1892	20,853	9	11	1,527	8	3	17·2	1,096	18	3	12·6	16,700
†December 31, 1892	27,476	19	0	1,740	6	7	15·2	1,298	19	10	11·3	16,330
April 1, 1893	19,575	15	1	1,662	14	7	20·3	356	2	2	4·3	17,350
July 1, 1893	28,271	11	10	1,870	18	4	16·0	1,440	19	1	12·2	17,453
September 30, 1893	19,573	12	11	1,766	3	7	21·6	629	7	3	7·7	17,729
December 30, 1893	25,411	2	3	1,902	10	7	17·9	787	7	1	7·4	18,150
March 31, 1894	18,760	10	6	1,850	11	9	23·6	440	7	1	5·6	18,816
June 30, 1894	33,459	2	0	2,048	4	1	14·7	1,718	12	8	12·3	17,140
September 29, 1894	19,778	16	11	1,853	0	3	22·4	619	6	11	7·5	17,731
December 29, 1894	28,259	5	11	1,945	9	0	16·5	1,253	3	8	10·6	17,057
March 30, 1895	21,432	7	2	1,975	2	7	22·1	926	11	4	10·3	19,745
June 29, 1895	36,377	16	6	2,104	18	10	13·8	2,492	7	9	16·4	18,890
September 28, 1895	26,452	16	8	1,998	8	1	18·1	1,236	14	3	11·2	19,682
December 28, 1895	37,626	17	10	2,132	11	7	13·6	2,394	9	1	15·2	20,509
March 28, 1896	26,616	12	0	2,062	16	11	18·6	1,145	5	4	10·3	23,341
June 27, 1896	44,267	10	9	2,228	18	1	12·0	2,968	3	3	16·0	22,508
Totals	824,086	4	0	56,375	7	7	16·2	38,913	2	3	11·2	....

† Fourteen weeks.

PRODUCTIVE DEPARTMENTS.—HALF-YEARLY STATEMENT SHOWING EXPENSES AND NET PROFIT.
TAILORING FACTORY.

Half-year ending	Transferred.	Production.	Expenses on Production.	Rate per cent.	Net Profit on Production.	Rate per cent.	Net Loss.	Rate per cent.	Stocks.
	£ s. d.	£ s. d.	£ s. d.		£ s. d.		£ s. d.		£
*November 4, 1882 ..	427 10 10	427 10 10	319 12 11	74·70	1 11 2	0·23	....	....	....
May 5, 1883 ..	1,083 16 1	1,083 16 1	790 8 0	72·94	19 0 5	1·75	....	....	187
November 3, 1883 ..	1,185 12 0	1,185 12 0	842 11 4	71·05	....	....	7 11 0	0·59	304
May 3, 1884 ..	1,051 9 0	1,051 9 0	740 0 2	70·40	11 18 5	1·04	....	....	344
November 1, 1884 ..	1,469 18 10	1,469 18 10	913 13 9	62·15	33 10 9	2·24	....	....	341
May 2, 1885 ..	1,499 9 9	1,499 9 9	917 12 1	61·10	16 1 9	1·06	....	....	327
October 31, 1885 ..	2,112 2 0	2,112 2 0	1,261 13 6	59·70	64 2 7	3·03	....	....	445
May 1, 1886 ..	2,602 2 9	2,602 2 9	1,556 13 2	59·80	34 13 0	1·30	....	....	326
†December 25, 1886 ..	3,650 15 10	3,650 15 10	2,289 17 2	62·71	....	....	21 3 4	0·57	485
June 25, 1887 ..	3,852 13 11	3,852 13 11	2,278 0 6	59·13	133 1 3	3·45	....	....	617
December 31, 1887 ..	4,226 12 8	3,892 18 11	2,569 7 4	66·00	....	....	208 9 3	5·34	424
June 30, 1888 ..	3,742 1 6	3,919 7 2	2,413 7 11	61·57	152 9 4	3·87	....	....	687
December 29, 1888 ..	4,589 14 3	4,719 19 4	2,897 10 0	61·39	356 14 1	7·54	....	....	1,083
June 29, 1889 ..	4,357 3 8	4,233 12 8	2,661 2 9	62·86	325 17 1	7·67	....	....	1,012
December 28, 1889 ..	4,892 19 11	5,165 18 0	2,919 0 10	56·51	609 5 0	11·79	....	....	1,280
June 28, 1890 ..	6,702 17 5	6,446 19 3	3,660 17 11	56·77	646 2 7	10·02	....	....	1,191
December 27, 1890 ..	7,166 9 4	7,691 2 10	4,171 19 9	54·23	699 16 9	9·10	....	....	1,564
June 27, 1891 ..	6,127 2 2	6,012 16 5	3,575 1 8	59·46	550 6 9	9·15	....	....	1,638

* Thirteen weeks. † Thirty-four weeks.

TAILORING FACTORY—*continued.*

Half-year ending	Transferred.	Production.	Expenses on Production.	Rate per cent.	Net Profit on Production.	Rate per cent.	Net Loss.	Rate per cent.	Stocks.
	£ s. d.	£ s. d.	£ s. d.		£ s. d.		£ s. d.		£
December 26, 1891 ..	6,990 5 3	6,743 18 1	3,712 11 5	55·02	736 18 7	10·92	....	....	1,222
June 25, 1892 ..	7,444 1 7	7,283 9 10	4,186 6 0	57·47	867 10 0	11·90	....	....	1,218
‡December 31, 1892 ..	8,153 15 0	8,533 19 11	4,410 12 3	51·67	1,011 1 4	11·84	....	....	1,663
July 1, 1893 ..	8,039 8 5	8,263 11 8	4,697 14 5	56·84	1,026 10 2	12·41	....	....	1,782
December 30, 1893 ..	7,655 9 0	7,207 19 7	4,224 19 5	58·61	820 1 8	11·37	....	....	1,120
June 30, 1894 ..	8,143 3 4	8,011 18 7	4,673 12 4	58·83	1,083 4 8	13·51	....	....	1,133
December 29, 1894 ..	8,018 8 9	8,125 19 3	4,472 5 8	55·03	957 2 11	11·77	....	....	1,177
June 29, 1895 ..	9,212 1 2	9,191 3 11	5,053 18 6	54·98	1,444 18 8	15·72	....	....	1,175
December 28, 1895 ..	11,056 11 7	11,561 18 10	5,543 4 1	47·94	1,646 14 4	14·23	....	....	1,634
June 27, 1896 ..	10,780 9 3	10,313 3 10	5,674 6 0	55·01	1,599 12 11	15·51	....	....	1,410
Totals	146,234 8 3	146,255 9 1	83,428 0 10	57·04	14,848 6 2	....	237 3 7		
					237 3 7	....			
					14,611 2 7	9·99			

‡ Twenty-seven weeks.

PRODUCTIVE DEPARTMENTS.—Half-yearly Statements.

SHIRT FACTORY.

Half-year ending	Transferred.	Production.	Expenses on Production.	Rate per cent.	Net Profit on Production.	Rate per cent.	Net Loss.	Rate per cent.	Stocks.
	£ s. d.	£ s. d.	£ s. d.		£ s. d.		£ s. d.		£
*November 4, 1882 ..	201 11 0	201 11 0	159 13 10	79·10	21 9 4	10·44	....	....	....
May 5, 1883 ..	415 17 10	415 17 10	348 1 9	83·85	13 13 2	3·13	....	....	12
November 3, 1883 ..	343 15 3	343 15 3	306 18 0	89·21	8 6 0	2·33	....	....	15
May 3, 1884 ..	459 18 4	459 18 4	381 12 5	83·00	17 15 6	3·70	....	....	22
November 1, 1884 ..	410 1 3	410 1 3	362 9 4	88·29	....	....	16 6 7	3·90	20
May 2, 1885 ..	768 16 11	768 16 11	500 2 1	65·10	50 17 10	6·51	....	....	55
October 31, 1885 ..	638 10 9	638 10 9	384 18 7	60·18	38 7 8	5·95	....	....	70
May 1, 1886 ..	764 15 0	764 15 0	461 14 1	60·34	25 8 10	3·27	....	....	43
†December 25, 1886 ..	1,128 1 11	1,128 1 11	670 18 5	59·39	46 14 6	4·07	....	....	48
June 25, 1887 ..	792 4 10	792 4 10	484 1 9	61·11	16 18 11	2·02	....	....	90
December 31, 1887 ..	839 11 6	858 1 2	549 9 0	63·98	23 6 6	2·68	....	....	92
June 30, 1888 ..	1,071 16 3	1,074 14 6	691 14 1	64·33	11 1 11	1·02	....	....	115
December 29, 1888 ..	1,296 19 3	1,306 0 6	885 13 2	67·76	....	....	24 7 5	1·83	112
June 29, 1889 ..	1,442 12 0	1,430 15 2	873 5 1	61·04	99 15 8	6·92	....	....	106
December 28, 1889 ..	1,355 5 8	1,373 13 3	855 2 2	62·27	110 13 8	8·01	....	....	119
June 28, 1890 ..	1,369 13 2	1,357 11 9	841 1 3	61·09	122 10 9	8·99	....	....	98
December 27, 1890 ..	1,488 19 11	1,495 2 10	940 0 2	62·87	131 5 9	8·76	....	....	72

* Thirteen weeks. † Thirty-four weeks.

PRODUCTIVE DEPARTMENTS.—SHIRT FACTORY—*continued.*

Half-year ending	Transferred.	Production.	Expenses on Production.	Rate per cent.	Net Profit on Production.	Rate per cent.	Net Loss.	Rate per cent.	Stocks.
	£ s. d.	£ s. d.	£ s. d.		£ s. d.		£ s. d.		£
June 27, 1891 ..	1,667 17 0	1,687 17 8	998 4 1	59·16	142 5 10	8·41	....	....	131
December 26, 1891 ..	1,722 15 2	1,666 15 3	1,048 14 10	62·90	192 18 10	11·58	....	....	120
June 25, 1892 ..	1,547 4 6	1,570 7 10	1,021 3 4	65·03	141 6 3	8·98	....	....	215
‡December 31, 1892 ..	1,813 15 7	1,862 13 4	1,192 15 2	64·01	103 19 8	5·58	....	....	208
July 1, 1893 ..	1,875 9 4	1,816 19 3	1,216 18 9	66·97	147 2 7	8·09	....	....	146
December 30, 1893 ..	1,976 0 8	1,980 17 8	1,250 12 8	63·13	181 12 10	9·14	....	....	256
June 30, 1894 ..	2,109 9 2	2,114 11 6	1,328 8 7	62·82	216 1 10	10·21	....	....	372
December 29, 1894 ..	2,653 1 10	2,677 12 11	1,544 0 8	57·67	417 12 4	15·77	....	....	764
June 29, 1895 ..	3,344 5 1	3,357 18 7	1,871 6 3	55·73	....	....	17 14 0	0·53	802
December 28, 1895 ..	4,158 14 2	4,264 2 10	2,075 16 5	48·66	469 11 0	11·02	....	....	958
June 27, 1896 ..	4,563 2 0	4,515 19 4	2,298 13 7	50·57	613 0 3	13·48	....	....	1,531
Totals	42,220 5 4	42,365 8 5	25,543 9 6	60·29	3,363 17 5	....	58 8 0	....	....
					58 8 0				
					3,305 9 5	7·80			

‡ Twenty-seven weeks.

PRODUCTIVE DEPARTMENTS—HALF-YEARLY STATEMENT.

SLOP FACTORY.

Half-year ending	Transferred.			Production.			Expenses on Production.			Rate per cent.	Net Profit on Production.			Rate per cent.	Stocks.
	£	s.	d.	£	s.	d.	£	s.	d.		£	s.	d.		£
*June 27, 1891	1,372	12	5	1,426	13	5	988	1	7	69·28	48	16	4	3·36	192
December 26, 1891	1,189	6	11	1,211	19	8	867	1	7	71·53	40	2	6	3·30	186
June 25, 1892	1,315	0	7	1,272	2	11	894	15	9	70·28	68	11	9	5·34	126
†December 31, 1892	1,477	0	3	1,358	1	6	955	16	10	70·32	67	2	6	4·93	100
July 1, 1893	1,576	14	2	1,481	6	11	1,005	13	4	67·86	36	10	0	2·43	434
December 30, 1893	1,582	3	6	1,558	0	2	996	11	6	63·92	5	7	4	0·32	476
June 30, 1894	1,665	5	10	1,608	10	1	1,082	2	11	67·28	111	14	11	6·96	825
December 29, 1894	1,828	1	6	1,826	8	2	1,027	14	9	56·24	1	18	3	0·10	410
June 29, 1895	1,640	7	2	1,633	7	5	1,198	15	9	73·36	117	16	11	7·16	314
December 28, 1895	1,872	19	3	1,907	14	11	1,324	18	2	69·48	128	13	3	6·71	251
June 27, 1896	1,821	18	11	1,756	15	5	1,261	5	3	71·81	166	16	7	9·45	94
Totals........	17,041	10	6	17,041	0	7	11,602	17	5	68·08	793	10	4	4·65	....

* Twenty-nine weeks. † Twenty-seven weeks.

PRODUCTIVE DEPARTMENTS.—HALF-YEARLY STATEMENT.—MANTLE FACTORY.

Half-year ending	Transferred.	Production.	Expenses on Production.	Rate per cent.	Net Profit on Production.	Rate per cent.	Net Loss.	Rate per cent.	Stocks.
	£ s. d.	£ s. d.	£ s. d.		£ s. d.		£ s. d.		£
June 27, 1891	994 10 2	1,005 7 3	734 6 4	73·03	....	....	86 17 4	8·64	203
December 26, 1891	1,330 1 0	1,352 19 4	870 3 6	64·30	....	....	52 3 0	3·84	350
June 25, 1892	1,157 19 8	1,165 4 11	809 12 10	69·44	....	....	107 17 7	9·26	324
*December 31, 1892	1,559 2 2	1,541 19 2	892 11 5	57·84	97 6 1	6·30	....	....	275
July 1, 1893	1,160 1 1	1,166 0 2	799 2 11	68·52	....	....	63 4 9	5·40	463
December 30, 1893	1,188 9 9	1,188 13 11	787 5 7	66·24	....	....	92 16 3	7·74	382
June 30, 1894	1,330 12 7	1,320 11 10	765 7 1	57·95	26 6 4	1·97	....	....	372
December 29, 1894	1,380 18 3	1,380 18 3	731 3 4	52·97	....	....	5 11 10	0·40	178
June 29, 1895	1,349 9 9	1,349 9 9	733 2 4	54·33	60 1 11	4·44	....	....	151
December 28, 1895	1,603 17 10	1,603 17 10	910 0 2	56·76	158 4 1	9·85	....	....	82
June 27, 1896	1,423 16 8	1,423 16 8	781 18 6	54·95	55 19 9	3·93	....	....	110
Totals	14,478 18 11	14,498 19 1	8,814 14 0	60·79	397 18 2	2·74	408 10 9	....	..
							397 18 2		
							10 12 7	0·07	

* Twenty-seven weeks.

PRODUCTIVE DEPARTMENTS.

Half-yearly Statement showing

Half-year ending	Transferred.			Production			Expenses.		
	£	s.	d.	£	s.	d.	£	s.	d.
*May 2, 1885	3,298	16	7	3,298	16	7	1,183	10	5
October 31, 1885	10,505	15	7	10,505	15	7	3,328	18	5
May 1, 1886	11,992	1	5	11,992	1	5	3,733	7	5
†December 25, 1886	21,824	5	3	21,824	5	3	6,391	18	6
June 25, 1887	14,863	9	5	14,863	9	5	4,957	18	9
December 31, 1887	18,993	10	11	18,971	7	5	6,080	12	7
June 30, 1888	14,421	8	10	15,456	0	7	5,506	7	8
December 29, 1888	23,752	4	3	23,911	13	1	8,056	18	10
June 29, 1889	22,306	15	8	24,829	5	11	8,341	2	10
December 28, 1889	27,323	7	10	29,256	15	8	10,581	3	6
June 28, 1890	27,000	12	3	28,621	13	5	10,465	6	5
December 27, 1890	30,407	10	8	30,503	13	1	11,379	17	10
June 27, 1891	32,049	7	0	36,406	9	8	12,584	0	3
December 26, 1891	39,077	18	1	36,629	1	10	13,442	9	3
June 25, 1892	37,242	4	10	38,374	15	3	14,141	17	0
‡December 31, 1892	45,510	0	11	47,150	2	10	17,174	4	2
July 1, 1893	47,638	17	8	52,446	7	4	18,043	6	7
December 30, 1893	51,067	8	4	46,571	6	2	18,989	11	10
June 30, 1894	46,791	19	6	51,486	16	6	19,553	9	6
December 29, 1894	55,931	9	10	59,200	17	5	21,447	5	10
June 29, 1895	55,806	6	10	60,418	2	5	22,869	19	4
December 28, 1895	66,638	6	11	71,710	15	0	23,958	14	5
June 27, 1896	33,329	19	7	25,833	19	5	15,864	14	10
Totals	737,773	18	2	760,263	11	3	278,076	16	2

* Thirteen weeks. † Thirty-four weeks. ‡ Twenty-seven weeks.

BOOT AND SHOE FACTORY.

Expenses and Net Profit.

Rate per cent on Production.	Net Profit on Production.	Rate per cent on Production.	Net Loss.	Rate per cent.	Stocks.
	£ s. d.		£ s. d.		£
35·87	....	....	47 9 10	1·42	2,176
31·68	240 19 3	2·28	....	....	3,435
31·12	247 1 10	2·05	....	....	4,042
29·28	867 3 2	3·97	....	....	4,020
33·35	124 7 11	0·83	....	....	7,350
32·04	1,013 15 11	5·33	....	....	5,406
35·62	687 14 1	4·44	....	....	7,886
33·69	1,072 2 11	4·48	....	....	11,869
33·59	1,041 3 7	4·19	....	....	12,588
36·16	1,509 19 4	5·15	....	....	15,890
36·56	1,867 10 10	6·52	....	....	19,920
37·30	1,744 10 11	5·71	....	....	17,349
34·56	1,635 2 2	4·49	....	....	24,080
36·69	1,996 18 7	5·45	....	....	18,292
36·85	2,115 17 8	5·51	....	....	18,006
36·42	2,743 19 7	5·82	....	....	18,220
34·40	4,070 11 6	7·76	....	....	24,660
40·77	3,360 15 11	7·21	....	....	20,696
37·97	3,378 12 5	6·56	....	....	27,948
36·22	4,052 10 0	6·84	....	....	27,177
37·85	3,701 7 10	6·12	....	....	33,558
33·41	5,678 11 5	7·91	....	....	35,328
61·40	1,177 12 4	4·55	....	....	44,226
36·57	44,328 9 2	....	47 9 10	....	....
	47 9 10	....			
	44,280 19 4	5·82			

PRODUCTIVE DEPARTMENTS.

CABINET

Half-year ending	Transferred.			Production.			Expenses on Production.		
	£	s.	d.	£	s.	d.	£	s.	d.
May 2, 1885	482	11	10	482	11	10	282	11	9
October 31, 1885	805	18	0	805	18	0	442	17	3
May 1, 1886	732	8	1	732	8	1	428	0	11
*December 25, 1886	1,499	5	10	1,499	5	10	776	10	10
June 25, 1887	1,202	14	1	1,202	14	1	639	11	8
December 31, 1887	1,286	2	6	1,354	12	11	739	17	5
June 30, 1888	1,418	3	10	1,452	12	5	714	18	7
December 29, 1888	2,671	15	2	2,871	0	11	1,595	3	9
June 29, 1889	3,275	7	8	3,409	18	0	1,835	15	3
December 28, 1889	4,379	0	5	4,362	1	6	2,186	9	9
June 28, 1890	6,137	16	9	6,116	7	10	3,260	18	5
December 27, 1890	7,200	18	4	7,312	2	1	3,855	8	1
June 27, 1891	6,976	13	6	7,340	2	9	3,931	9	3
December 26, 1891	7,702	14	3	7,806	11	0	4 065	6	4
June 25, 1892	7,556	16	4	7,784	17	1	4,251	2	6
†December 31, 1892	8,961	9	5	9,602	0	0	5,020	15	3
July 1, 1893	8,532	16	8	9,781	11	7	4,937	16	1
December 30, 1893	8,351	5	9	7.872	10	10	5,037	6	9
June 30, 1894	8,763	6	1	8,719	3	0	5,022	7	11
December 29, 1894	9,837	7	10	10,378	12	10	5,914	12	10
June 29, 1895	10,344	12	9	7,783	11	10	5,502	12	0
December 28, 1895	11,245	11	3	10,119	10	4	5,744	17	3
June 27, 1896	11,726	12	3	12,431	5	0	6,081	3	9
Total	131,091	8	7	131,221	9	9	72,267	13	7

* Thirty-four weeks. † Twenty-seven weeks.

HALF-YEARLY STATEMENT.

WORKS.

Rate per cent.	Net Profit on Production.	Rate per cent.	Net Loss.	Rate per cent.	Stocks.
	£ s. d.		£ s. d.		£
58·50	....	....	6 4 1	1·24	294
54·90	26 14 4	3·22	....	....	364
58·47	16 1 4	2·18	....	....	484
51·76	83 10 11	5·53	....	....	425
53·16	24 19 3	2·07	....	....	676
54·57	42 11 9	3·10	....	....	1,069
49·17	36 17 3	2·48	....	....	1,281
55·55	....	....	57 9 4	1·98	2,152
53·82	49 8 7	1·43	....	....	2,358
50·11	134 9 11	3·07	....	....	2,466
53·30	478 5 4	7·81	....	....	3,470
52·72	420 19 9	5·75	....	....	4,975
53·55	....	....	40 12 10	0·54	5,484
52·07	215 6 10	2·75	....	....	6,124
54·61	216 4 7	2·77	....	....	5,845
52·28	724 4 5	7·54	....	....	6,808
50·48	510 16 10	5·21	....	....	7,976
63·98	600 19 11	7·63	....	....	8,696
57·59	365 12 5	4·18	....	....	8,139
56·98	302 10 3	2·91	....	....	9,233
70·69	470 14 2	6·03	....	....	8,826
56·76	533 9 0	5·26	....	....	8,552
48·91	820 8 7	6·59	....	....	9,287
55·07	6,074 5 5	....	104 6 3	....	....
	104 6 3	....			
	5,969 19 2	4·56			

PRODUCTIVE DEPARTMENTS.—HALF-YEARLY STATEMENT.

HOSIERY FACTORY.

Half-year ending	Transferred.	Production.	Expenses on Production.	Rate per cent.	Net Profit on Production.	Rate per cent.	Net Loss.	Rate per cent.	Stocks.
	£ s. d.	£ s. d.	£ s. d.		£ s. d.		£ s. d.		£
July 1, 1893 ..	2,832 0 11	2,724 0 3	963 12 7	35·35	....	....	43 8 2	1·57	785
December 30, 1893 ..	2,679 13 9	2,743 7 6	964 8 11	35·14	91 13 8	3·31	....	....	1,054
June 30, 1894 ..	2,564 10 9	2,490 14 3	942 13 7	37·83	56 19 7	2·29	....	....	885
December 29, 1894 ..	2,561 17 5	2,674 9 8	948 16 4	35·45	15 5 7	0·56	....	....	960
June 29, 1895 ..	3,098 12 8	3,071 16 9	1,026 4 0	33·40	195 9 0	6·38	....	....	817
December 28, 1895 ..	3,867 12 8	3,688 10 2	1,165 6 0	31·58	265 18 11	7·21	....	....	745
June 27, 1896 ..	4,111 11 6	4,151 14 9	1,288 2 10	31·02	387 17 10	9·32	....	....	858
Totals........	21,715 19 8	21,544 13 4	7,299 4 3	33·87	1,013 4 7	....	43 8 2	....	..
					43 8 2				
					969 16 5	4·50			

PRODUCTIVE DEPARTMENTS.—HALF-YEARLY STATEMENT.

BRUSH FACTORY.

Half-year ending	Transferred.			Production.			Expenses on Production.			Rate per cent.	Net Profit on Production.			Rate per cent.	Stocks.
	£	s.	d.	£	s.	d.	£	s.	d.		£	s.	d.		£
June 28, 1890..	1,357	19	8	1,510	1	0	599	3	8	39·66	144	15	1	9·53	823
December 27, 1890..	1,769	4	3	2,295	16	10	830	4	4	36·16	121	13	11	5·27	1,302
June 27, 1891..	2,003	6	8	2,244	13	0	913	12	6	40·68	168	15	11	7·48	1,775
December 26, 1891..	1,794	13	0	1,849	7	7	797	0	1	43·10	88	8	1	4·75	2,758
June 25, 1892..	2,092	6	4	1,975	19	11	838	18	8	42·46	67	8	4	3·39	2,281
*December 31, 1892..	2,399	5	10	2,454	14	4	1,082	17	0	44·13	128	15	7	5·25	2,991
July 1, 1893..	2,289	14	8	2,526	6	10	963	10	9	38·12	30	0	11	1·19	2,920
December 30, 1893..	1,941	6	5	1,416	6	5	804	5	10	56·78	160	12	3	11·30	2,971
June 30, 1894..	2,700	17	2	2,681	17	9	952	3	6	35·49	169	8	2	6·30	2,844
December 29, 1894..	2,158	14	9	2,090	0	9	915	15	8	43·78	185	9	8	8·85	3,277
June 29, 1895..	2,867	5	1	2,942	1	3	1,018	17	0	34·63	316	15	4	10·74	2,842
December 28, 1895..	2,500	8	0	2,257	1	11	944	11	11	41·82	353	12	5	15·64	3,847
June 27, 1896..	3,172	11	6	3,454	12	2	1,082	4	8	31·32	101	16	2	2·95	3,772
Totals	29,047	13	4	29,698	19	9	11,743	5	7	39·54	2,037	11	10	6·85	....

* Twenty-seven weeks.

PRODUCTIVE DEPARTMENTS.—HALF-YEARLY STATEMENT.—PRINTING WORKSHOP.

Half-year ending	Transferred.			Production.			Expenses on Production.			Rate per cent.	Net Profit on Production.			Rate per cent.	Stocks.
	£	s.	d.	£	s.	d.	£	s.	d.		£	s.	d.		£
*December 31, 1887..	649	14	2	653	15	5	347	14	7	53·13	41	19	10	6·43	175
June 30, 1888..	1,466	11	6	1,475	13	9	705	16	7	47·79	117	10	5	7·93	180
December 29, 1888..	1,648	5	10	1,645	18	9	775	0	9	47·11	168	12	0	10·21	228
June 29, 1889..	1,770	9	10	1,842	0	2	1,000	3	1	54·28	115	6	1	6·24	425
December 28, 1889..	2,084	17	7	2,143	11	9	1,126	4	6	52·54	146	14	5	6·81	602
June 28, 1890..	3,093	3	5	3,170	2	11	1,526	11	10	48·10	291	9	3	9·17	706
December 27, 1890..	4,148	16	11	4,008	9	9	1,770	11	1	44·16	200	9	5	4·99	832
June 27, 1891..	4,096	9	8	4,074	16	11	1,796	19	0	44·10	245	16	10	6·03	1,223
December 26, 1891..	4,921	14	11	5,084	10	0	2,059	18	5	40·51	472	6	10	9·28	1,341
June 25, 1892..	5,730	6	5	5,867	10	10	2,405	9	7	40·99	596	19	0	10·17	2,144
†December 31, 1892..	6,913	1	10	6,866	7	6	2,979	16	5	43·38	290	3	4	4·22	2,058
July 1, 1893..	7,452	17	5	7,437	13	11	3,041	11	5	40·89	797	17	0	10·73	1,850
December 30, 1893..	7,520	17	6	7,374	7	0	2,972	7	8	40·30	749	19	9	10·17	1,584
June 30, 1894..	7,078	10	1	7,101	4	8	2,924	18	6	41·19	678	12	2	9·54	1,677
December 29, 1894..	8,414	1	5	8,440	6	9	3,034	17	8	35·94	1,479	13	5	17·52	1,688
June 29, 1895..	8,414	2	5	8,474	17	6	3,357	10	0	39·61	1,151	18	10	13·59	1,602
December 28, 1895..	9,644	18	2	9,782	1	0	3,692	4	9	37·74	1,237	4	6	12·64	2,174
June 27, 1896..	11,139	5	5	11,037	2	10	3,916	0	7	35·48	1,402	5	6	12·70	2,095
Totals	96,188	4	6	96,480	11	5	39,433	16	5	40·87	10,184	18	7	10·55	....

* Thirteen weeks.

Twenty-seven weeks.

PRODUCTIVE DEPARTMENTS.—HALF-YEARLY STATEMENT.

PRESERVE WORKS.

Half-year ending	Transferred.			Production.			Expenses on Production.			Rate per cent.	Net Profit on Production.			Rate per cent.	Stocks.
	£	s.	d.	£	s.	d.	£	s.	d.		£	s.	d.		£
*December 27, 1890..	11,200	5	8	12,816	4	7	1,036	0	6	8·08	681	6	4	....	3,091
June 27, 1891..	8,633	11	2	7,615	18	9	1,066	0	9	14·00	592	6	2	7·77	5,980
December 26, 1891..	20,734	0	8	28,495	2	7	1,934	11	8	6·78	1,147	2	0	4·02	9,042
June 25, 1892..	18,770	4	10	10,410	16	11	2,010	2	5	19·30	1,063	13	3	10·21	11,041
†December 31, 1892..	23,729	11	5	40,212	8	7	3,041	17	4	7·56	1,742	14	3	4·33	21,380
July 1, 1893..	26,389	17	10	21,419	16	11	2,810	5	2	13·11	757	10	6	3·53	16,566
December 30, 1893..	25,696	12	10	27,306	10	9	3,773	3	8	13·81	1,462	7	8	5·35	20,553
June 30, 1894..	29,166	6	6	24,276	15	1	4,015	16	7	16·66	1,697	6	2	6·99	14,792
December 29, 1894..	27,596	1	11	37,606	16	3	3,971	1	1	10·55	2,457	4	9	6·53	17,925
June 29, 1895..	29,558	10	10	22,581	4	1	3,884	12	9	17·20	1,293	7	9	5·72	14,012
December 28, 1895..	26,537	16	2	37,833	12	4	4,215	12	10	11·14	2,545	10	7	6·72	22,205
June 27, 1896..	30,712	12	10	21,656	2	4	3,983	9	2	18·39	721	3	9	3·32	17,706
Totals	278,725	12	8	292,231	9	2	35,772	13	11	12·24	16,161	13	2	5·53	....

* Twenty-eight weeks. † Twenty-seven weeks.

PRODUCTIVE DEPARTMENTS.—HALF-YEARLY STATEMENT.

CONFECTIONERY WORKS.

Half-year ending	Transferred.	Production.	Expenses on Production.	Rate per cent.	Net Profit on Production.	Rate per cent.	Net Loss.	Rate per cent.	Stocks.
	£ s. d.	£ s. d.	£ s. d.		£ s. d.		£ s. d.		£
Dec. 26, 1891....	3,166 2 9	3,278 7 3	413 0 10	12·59	95 10 10	2·89	....	....	439
June 25, 1892....	2,185 15 6	2,073 11 0	295 12 1	14·23	45 6 7	2·17	....	....	344
*Dec. 31, 1892....	3,293 18 0	3,991 17 5	987 12 1	24·72	....	....	494 16 7	12·40	1,234
July 1, 1893....	5,194 4 3	5,157 1 5	1,458 8 6	28·27	....	....	238 10 2	4·61	1,175
Dec. 30, 1893....	5,700 8 3	5,819 17 4	1,443 5 10	24·79	....	....	198 19 3	3·42	1,619
June 30, 1894....	6,796 19 3	6,741 14 1	1,491 11 0	22·11	288 18 2	4·28	....	....	1,987
Dec. 29, 1894....	7,246 15 4	8,056 18 4	1,574 4 11	19·53	429 8 10	5·32	....	....	1,495
June 29, 1895....	6,373 4 0	6,460 14 3	1,552 18 10	24·04	249 3 10	3·58	....	....	1,968
Dec. 28, 1895....	6,456 10 3	6,325 8 10	1,517 0 6	23·98	291 19 10	4·61	....	....	1,216
June 27, 1896....	6,827 11 4	6,590 11 0	1,550 4 3	23·52	19 10 3	0·28	....	....	1,150
Totals........	53,241 8 11	54,496 0 11	12,283 18 10	22·54	1,419 18 4	....	932 6 0	....	..
					932 6 0				
					487 12 4	0·89			

* Twenty-seven weeks.

PRODUCTIVE DEPARTMENTS.—HALF-YEARLY STATEMENT.

TOBACCO WORKS.

Half-year ending	Transferred.			Production.			Expenses on Production.			Rate per cent.	Net Profit on Production.			Rate per cent.	Stocks.
	£	s.	d.	£	s.	d.	£	s.	d.		£	s.	d.		£
Dec. 26, 1891	15,510	4	8	21,326	17	2	1,704	19	6	7·99	651	11	11	3·05	8,958
June 25, 1892	25,947	5	8	26,056	14	0	2,253	18	3	8·65	713	4	9	2·73	9,233
*Dec. 31, 1892	33,385	18	6	32,859	15	4	2,512	17	8	7·64	1,725	6	10	5·25	13,461
July 1, 1893	33,515	17	8	32,756	15	0	2,668	3	5	8·14	1,216	10	8	3·71	18,572
Dec. 30, 1893	33,886	8	8	35,071	17	7	2,547	4	9	7·26	1,426	13	6	4·06	15,580
June 30, 1894	35,212	6	2	35,751	16	2	2,561	10	8	7·16	494	10	7	1·38	14,063
Dec. 29, 1894	38,795	13	3	39,137	16	4	2,733	0	6	6·98	1,105	1	11	2·82	17,381
June 29, 1895	46,043	6	10	45,896	15	6	3,054	13	1	6·65	1,650	18	2	3·60	16,783
Dec. 28, 1895	50,577	16	6	50,093	4	11	3,116	5	9	6·22	2,059	12	2	4·11	16,498
June 27, 1896	56,764	5	3	58,597	16	9	3,526	17	0	6·02	3,159	11	7	5·39	23,896
Totals	369,639	3	2	377,549	8	9	26,679	10	7	7·06	14,203	2	1	3·76	....

* Twenty-seven weeks.

PRODUCTIVE DEPARTMENTS.—HALF-YEARLY STATEMENT.

CHANCELOT FLOUR MILLS.

Half-year ending	Sales and Transfers.	Production.	Expenses on Production.	Rate per cent.	Net Profit on Production.	Rate per cent.	Net Loss on Production.	Rate per cent.	Stocks.
	£ s. d.	£ s. d.	£ s. d.		£ s. d.		£ s. d.		£
Dec. 29, 1894....	23,102 14 7	38,609 14 5	4,592 10 6	11·89	....	..	1,348 17 6	3·49	51,096
June 29, 1895....	113,158 15 6	105,711 16 11	10,065 16 10	9·52	....	..	3,033 19 3	2·87	40,335
Dec. 28, 1895....	119,419 12 9	120,530 16 6	11,143 19 0	9·24	1,033 0 7	0·85	....	..	75,399
June 27, 1896....	117,422 6 5	130,432 3 1	12,312 12 3	9·43	2,326 7 9	1·73	....	..	71,974
Totals......	373,103 9 3	395,284 10 11	38,114 18 7	9·64	3,359 8 4	0·85	4,382 16 9	..	....
							3,359 8 4		
							1,023 8 5	0·26	

ETTRICK TWEED MILLS.

Half-year ending	Transferred.	Production.	Expenses on Production.	Rate per cent.	Net Profit on Production.	Rate per cent.	Stocks.
	£ s. d.	£ s. d.	£ s. d.		£ s. d.		£
*June 27, 1896	7,171 12 1	4,317 13 0	1,606 16 3	37·20	46 9 1	1·06	7,403

* Nine weeks.

Employés.

NUMBER OF EMPLOYÉS, JUNE 27TH, 1896.

Distributive Departments.			Collective Totals.
Counting House—General	Glasgow	115	
Grocery	,,	82	
Stationery	,,	9	
Saddlery	,,	8	
Ham Curing	,,	19	
Potato	,,	2	
Cattle Buying	,,	1	
Drapery—General	,,	162	
Mantle	,,	11	
Millinery	,,	5	
Furniture	,,	67	
Boot	,,	44	
Clarence Street Dining-room	,,	5	
Sausage Work	,,	18	
Carting and Fodder	,,	90	
Dining-rooms	Shieldhall	13	
			651
Leith		67	
Kilmarnock		18	
Dundee		3	
Enniskillen		25	
Edinburgh—Sample-room		2	
Greenock—Sugar Forwarding		1	
			116
Productive Departments.			
General	Shieldhall	8	
Boot Factory	,,	740	
,, ,,	Parkview	190	
Tailoring Factory	Shieldhall	291	
Printing Department	,,	151	
Cabinet Workshop	,,	196	
Brush Factory	,,	33	
			1,609
Carried forward			2,376

NUMBER OF EMPLOYÉS, JUNE 27TH, 1896.

PRODUCTIVE DEPARTMENTS—continued.

			Collective Totals.
Brought forward			2,376
Preserve and Confectionery Works and Despatch	Shieldhall	213	
Tobacco Factory	,,	114	
Hosiery ,,	,,	75	
Slop ,,	,,	69	
Mantle ,,	Glasgow	39	
Shirt and Underclothing Factory	Shieldhall	146	
Coffee Essence Factory	,,	16	
Drug Department	,,	47	
Mechanical Department	,,	38	
Tinware Factory	,,	41	
Pickle Work	,,	20	
Cartwrights	,,	10	
Waterproof Factory	Glasgow	15	
			843

BUILDING DEPARTMENT.

GLASGOW—Joiners	103	
Builders	9	
Bricklayer	1	
Hewers	36	
Labourers	73	
Coopers	2	
Slaters	3	
Carvers	3	
Plumbers	18	
Painters	28	
Plasterers	29	
Management	5	
		310
EDINBURGH AND GRANGEMOUTH—Joiners	8	
Builder	1	
Bricklayers	12	
Labourers	22	
Painters	2	
Plumbers	3	
		48
FARM—Carbrook Mains		15
FLOUR MILLS—Chancelot, Edinburgh		97
ETTRICK MILLS—Selkirk		133
Total		3,822

Bonus to Labour.

The payment of bonus, since its institution in 1870, has taken three different forms. Till 1884 employés received, on wages earned, double the rate per £ allocated as dividend on members' purchases. This arrangement was then replaced by one which set aside the double claim of the employé, and, recognising a difference between workers in the distributive and productive departments, established a differential rate. The distributive employés received the same rate of bonus as was the rate of dividend on members' purchases, and the rate of bonus to productive workers was determined by the net aggregate profit made in the manufacturing departments only. This arrangement continued till 1892, when the system of bonus payment was again revised. Hitherto the whole bonus allocated had been paid over; but the present system, which allows a uniform rate to both distributive and productive departments, requires that one-half of each worker's bonus be retained and put to his credit, forming a special fund, called the Bonus Loan Fund. This capital bears interest at the rate of 3 per cent per annum, and is only withdrawable when the employé leaves the service of the society.

EMPLOYÉ-SHAREHOLDERS.

Simultaneously with the introduction of the present scheme of bonus, arrangements were made to permit of employés becoming shareholders in the society. The number of shares held by one individual may range from five to fifty of twenty shillings each, and the paid-up capital bears interest at the rate of 5 per cent per annum. By the rules of the society, the shareholding employés are entitled to send one representative to the quarterly meeting, and one for every 150 employés who become shareholders. At the present time 208 employés hold 3,274 shares, entitling them to send two representatives to the business meetings of the society.

The following statements show the amount of bonus paid each year from 1870 to date, and the total amount thus paid to employés, also the Bonus Loan Fund at date, and the Employé-Shareholders' Fund at 29th June, 1895:—

FIRST BONUS SCHEME.

	Amount. £	s.	d.	Average Rate per £. s.	d.
Quarter ending November 19, 1870	5	11	0	0	8
Year ,, ,, 18, 1871	40	10	0	0	10½
,, ,, ,, 16, 1872	52	7	0	0	9½
,, ,, ,, 15, 1873	90	1	8	0	9½
,, ,, ,, 14, 1874	116	9	0	0	8½
,, ,, ,, 13, 1875	109	15	4	0	8
,, ,, ,, 4, 1876	108	13	4	0	8
,, ,, ,, 3, 1877	121	10	0	0	8
,, ,, ,, 2, 1878	147	17	0	0	8
,, ,, ,, 2, 1879	203	3	0	0	9½
,, ,, October 30, 1880	322	9	3	1	1
,, ,, November 5, 1881	368	3	8	1	0
,, ,, ,, 4, 1882	453	9	1	0	11
,, ,, ,, 3, 1883	542	3	0	0	11½
,, ,, ,, 1, 1884	484	2	6	0	9½

SECOND BONUS SCHEME.

Year ending	Distributive Amount. £	s.	d.	Rate per £. s.	d.	Productive Amount. £	s.	d.	Rate per £. s.	d.
October 31, 1885	483	13	1	0	6¾	——			—	
December 25, 1886	873	0	6	0	6½	——			—	
,, 31, 1877	603	0	2	0	6¾	315	2	1	0	4
,, 29, 1888	683	12	1	0	6¼	628	11	7	0	7
,, 28, 1889	833	16	10	0	6½	1,016	14	10	0	8½
,, 27, 1890	1,139	6	10	0	7	1,752	10	6	0	11
,, 26, 1891	1,208	9	3	0	6¾	1,802	14	9	0	9
,, 31, 1892	1,813	8	3	0	6½	2,320	11	4	0	9

PRESENT BONUS SCHEME.

	£	s.	d.	Rate per £. s.	d.
Year ending December 30, 1893	3,775	15	0	0	6¼
,, ,, ,, 29, 1894	3,563	18	9	0	6
,, ,, ,, 28, 1895	4,634	14	0	0	7
Half-year ending June 27, 1896	2,562	15	9	0	7½

	£	s.	d.
Total amount paid as bonus to 27th June, 1896	£33,178	0	5
Amount of Bonus Loan Fund at 27th June, 1896	4,235	11	2

Employé-Shareholders' Fund at 27th June, 1896—208 employés holding 3,274 shares, with £2,175. 19s. 7d. paid up.

Twenty-eight Years' Wholesale Distribution in Scotland.

Scottish
Co-operative Wholesale Society Ltd.

YEARS.	CAPITAL.	SALES.	PROFITS.	YEARS.
1868, 13 weeks	£1,795	£9,697	£48	13 weeks, 1868
1869, 52 ,,	5,175	81,094	1,304	52 ,, 1869
1870, 50 ,,	12,543	105,249	2,419	50 ,, 1870
1871, 52 ,,	18,009	162,658	4,131	52 ,, 1871
1872, 52 ,,	30,931	262,530	5,435	52 ,, 1872
1873, 52 ,,	50,433	384,489	7,446	52 ,, 1873
1874, 52 ,,	48,982	409,947	7,553	52 ,, 1874
1875, 52 ,,	56,751	430,169	8,233	52 ,, 1875
1876, 51 ,,	67,219	457,529	8,836	51 ,, 1876
1877, 52 ,,	72,568	589,221	10,925	52 ,, 1877
1878, 52 ,,	83,174	600,590	11,969	52 ,, 1878
1879, 52 ,,	93,077	630,097	14,989	52 ,, 1879
1880, 52 ,,	110,179	845,221	21,685	52 ,, 1880
1881, 54 ,,	135,713	986,646	23,981	54 ,, 1881
1882, 52 ,,	169,429	1,100,588	23,220	52 ,, 1882
1883, 52 ,,	195,396	1,253,154	28,366	52 ,, 1883
1884, 52 ,,	244,186	1,300,331	29,435	52 ,, 1884
1885, 52 ,,	288,946	1,438,220	39,641	52 ,, 1885
1886, 60 ,,	333,653	1,857,152	50,398	60 ,, 1886
1887, 53 ,,	367,309	1,810,015	47,278	53 ,, 1887
1888, 52 ,,	409,668	1,963,853	53,538	52 ,, 1888
1889, 52 ,,	480,622	2,273,782	61,756	52 ,, 1889
1890, 52 ,,	575,322	2,475,601	76,545	52 ,, 1890
1891, 52 ,,	671,108	2,828,036	89,090	52 ,, 1891
1892, 53 ,,	778,494	3,104,768	96,027	53 ,, 1892
1893, 52 ,,	869,750	3,135,562	89,116	52 ,, 1893
1894, 52 ,,	940,835	3,056,582	88,452	52 ,, 1894
1895, 52 ,,	1,134,269	3,449,461	132,374	52 ,, 1895
1896, 26 ,,	1,184,184	1,789,262	81,250	26 ,, 1896
TOTALS.	1,184,184	38,791,518	1,115,445	TOTALS.

Commenced September, 1868.

SCOTTISH CO-OPERATIVE WHOLESALE SOCIETY LIMITED.

The following statements show the purchases made during 1895 by the various Societies, and the percentage of those purchases made through the Wholesale Society. We would explain that the total purchases are estimated, the exact figures being inaccessible, and have been computed by making a deduction of 20 per cent from the sales of each society as given in the last Congress Report. This deduction, we admit, does not, in every case, give the actual difference between selling and cost prices, but for general application it may be considered a fair one. We hope the results shown will lead to increased purchasing from the Wholesale Society on the part of a number of societies, as it is primarily with this object in view that the statements have been prepared.

Number.	Name of Society.	No. of Members as per Congress Report.	No. of Shares in Scottish Co-op. Wholesale Society.	Amount of Share Capital as per Congress Report.	Amount of Loan Capital as per Congress Report.	Share Capital in Wholesale Society.	Amount of Loan Capital in Wholesale Society.	Purchases from Wholesale Society.					Estimated Total Purchases, being 20 % less than Sales as given in Congress Report.	Percentage of Purchases from Wholesale to Total Purchases.	Number.
								Grocery.	Drapery.	Boots.	Furniture.	Total.			
				£	£	£	£	£	£	£	£	£	£		
1	Alva	814	750	9,622	302	750	3,075	7,972	2,073	766	400	11,211	16,868	66·5	1
2	Alloa	2,900	3,000	63,165	4,012	3,000	24,554	31,497	9,992	2,939	2,188	46,616	77,477	60·1	2
3	Alva Baking	718	409	6,881	1,657	306	1,739	3,491	..	..	..	3,491	5,004	69·7	3
4	Auchterarder Provident	179	200	1,404	517	200	347	1,574	409	63	53	2,099	2,795	75·1	4
5	Avonbank, Rutherglen	458	350	699	2,703	350	1,364	7,386	301	36	251	7,974	10,425	76·4	5
6	Armadale	436	450	11,585	..	337	8,480	8,989	1,653	386	621	11,649	18,939	61·5	6
7	Arbroath, High Street	1,096	1,100	11,518	2,780	1,100	3,550	14,983	974	467	247	16,671	20,642	80·7	7
8	Ardrossan	540	400	1,177	6,375	400	1,675	6,608	972	563	501	8,644	14,061	61·4	8
9	Abernethy	120	120	100	250	120	172	333	..	..	..	333	1,200	27·7	9
10	Aberuthven *a*	67	72	97	..	36	8	816	79	2	14	911	1,339	68·0	10
11	Arbroath Equitable	993	1,000	9,147	..	1,000	2,339	7,060	622	152	160	7,994	13,983	57·1	11
12	Auchinleck *a*	274	195	1,104	60	195	262	4,590	340	376	279	5,585	6,233	89·6	12
13	Auchtermuchty	284	260	1,444	100	136	9	273	308	95	29	705	4,077	17·2	13
14	Barrhead	1,764	1,700	5,546	32,750	1,700	9,659	33,449	5,046	3,316	2,242	44,053	50,924	86·5	14
15	Bo'ness	1,089	1,000	15,101	2,630	1,000	4,907	16,444	2,536	637	704	20,321	29,830	68·1	15
16	Bathgate *a*	687	700	11,876	..	700	4,883	8,441	1,592	478	300	10,791	21,752	49·6	16
17	Busby	374	400	1,086	4,647	400	1,530	6,662	660	487	303	8,112	12,727	63·7	17
18	Beith	670	510	1,287	5,441	510	762	5,509	688	451	299	6,947	12,310	56·4	18
19	Buckhaven	628	650	7,565	..	650	180	6,758	2,282	386	408	9,834	21,894	44·9	19
20	Brechin Equitable	1,705	1,600	29,032	..	1,606	7,426	11,410	2,098	926	397	14,831	19,661	75·4	20
21	Bonnybridge	610	530	10,103	..	530	1,100	10,417	2,910	1,352	968	15,647	22,296	70·1	21
22	Bonnyrigg	352	300	5,831	929	300	2,443	4,323	1,014	265	147	5,749	9,432	60·9	22
23	Blairdardie	97	50	337	..	50	187	1,794	238	146	108	2,286	3,066	74·5	23

SCOTTISH CO-OPERATIVE WHOLESALE SOCIETY LIMITED—*continued.*

Number.	Name of Society.	No. of Members as per Congress Report.	No. of Shares in Scottish Co-op. Wholesale Society.	Amount of Share Capital as per Congress Report.	Amount of Loan Capital as per Congress Report.	Share Capital in Wholesale Society.	Amount of Loan Capital in Wholesale Society.	Purchases from Wholesale Society.					Estimated Total Purchases, being 20 % less than Sales as given in Congress Report.	Percentage of Purchases from Wholesale to Total Purchases.	Number.
								Grocery.	Dra-pery.	Boots.	Furni-ture.	Total.			
				£	£	£	£	£	£	£	£	£	£	£	
24	Bridge of Weir	200	200	2,376	..	200	730	2,897	786	482	266	4,431	5,873	75·4	24
25	Broxburn	1,221	1,200	19.375	..	1,200	11,749	20,855	4,057	1,404	1,347	27,663	44,250	62·5	25
26	Bannockburn	782	550	11,492	..	550	2,295	8,398	3,528	1 387	637	13,950	20,441	68·2	26
27	Banchory	370	226	1,027	370	70	3	175	34	..	3	212	3,763	5·6	27
28	Burnbank, Hamilton	371	350	1,013	2,007	350	304	5,462	731	468	361	7,022	11,682	60·1	28
29	Blantyre	450	350	3,278	650	350	527	8,696	1,467	899	449	11,511	14,589	78·9	29
30	Bridge of Allan	97	100	241	257	100	180	1,394	241	158	90	1,883	2.843	66·2	30
31	Burntisland	173	230	1,517	..	194	29	2,234	362	192	67	2,855	3,405	83·8	31
32	Bellshill and Mossend ... *a*	194	220	190	987	220	455	2,917	600	237	197	3,951	3,719	..	32
33	Bainsford & Grahamston Baking.	1,320	1,100	9,037	..	1,100	1,269	6,542	..	..	7	6,549	9,546	68·6	33
34	Blairgowrie	176	150	461	970	150	55	2,590	11	163	24	2,788	3,719	74·9	34
35	Blebo Works	67	40	154	..	40	30	541	184	..	14	739	1,892	39·0	35
36	Crosshouse	406	340	8,837	..	170	6,465	4,907	675	475	238	6,295	10,314	61·0	36
37	Catrine	557	550	10,313	..	550	5,188	4,484	1,141	518	332	6,475	8,652	74·8	37
38	Carluke	410	330	4,638	..	330	1,734	6,006	1,674	609	336	8,625	13,000	66·3	38
39	Cathcart	196	100	273	20	100	201	2,226	51	..	67	2,344	4,276	54·8	39
40	Cadder	178	100	356	1,294	75	872	4,073	630	299	303	5,305	8,070	65·7	40
41	Camelon	588	500	13,210	987	500	2,161	9,916	3,313	1,422	941	15,592	23,681	65·8	41
42	Carstairs Junction	265	250	1,101	1,939	250	575	4,814	1,075	609	320	6,818	8,223	82·9	42
43	Coatbridge	2,991	2,900	55,074	5,052	2,900	15,089	59,447	12,955	3,727	3,919	80,048	114,650	69·8	43
44	Chapelhall	686	300	1,715	4,519	300	707	10,065	2,069	860	765	13,759	23,370	58·8	44
45	Chapelton	73	125	138	772	125	396	655	192	35	80	962	1,469	65·4	45
46	Clarkston	49	80	250	..	80	67	684	216	36	83	1,019	1,904	53·5	46
47	Calderbank	187	220	630	1,728	220	611	3,106	614	203	199	4,122	7,863	52·4	47
48	Cambusbarron ... *a*	171	140	1,709	666	140	888	3,168	301	240	140	3,849	5,152	74·7	48
49	Coaltown of Wemyss	106	82	1,276	..	82	301	1,274	209	50	47	1,580	3,143	50·2	49
50	Crofthead	522	550	1,291	8,517	550	7,024	11,416	1,929	639	519	14,503	17,496	82·8	50
51	Cumbernauld	176	160	1,772	..	160	213	1,993	328	224	136	2,681	4,784	56·0	51
52	Cleland ... *a*	350	400	3,190	1,000	300	471	5,220	1,060	359	271	6,910	9,309	74·2	52
53	Coalsnaughton	157	154	1,770	632	154	311	1,259	337	195	59	1.850	5,446	33·9	53
54	Clackmannan ... *b*	288	250	4,414	..	250	1,171	3,431	856	369	135	4,791	10,026	47·7	54
55	Cowdenbeath ... *a*	638	300	5,149	3,000	300	61	934	983	2	47	1,966	16,016	12·2	55
56	Crieff ... *b*	250	268	455	..	268	16	1,679	131	110	59	1,979	3,196	61·9	56
57	Carronbridge	236	240	842	..	240	304	1,797	265	127	146	2,335	3,283	71·1	57

SCOTTISH CO-OPERATIVE WHOLESALE SOCIETY LIMITED—*continued.*

Number.	Name of Society.	No. of Members as per Congress Report.	No. of Shares in Scottish Co-op. Wholesale Society.	Amount of Share Capital as per Congress Report.	Amount of Loan Capital as per Congress Report.	Share Capital in Wholesale Society.	Amount of Loan Capital in Wholesale Society.	Purchases from Wholesale Society. Grocery.	Drapery.	Boots.	Furniture.	Total.	Estimated Total Purchases, being 20 % less than Sales as given in Congress Report.	Percentage of Purchases from Wholesale to Total Purchases.	Number.
				£	£	£	£	£	£	£	£	£	£		
58	Clydebank	939	850	5,564	11,720	850	1,404	23,277	5,031	1,751	1,544	31,653	32,548	97·2	58
59	Cowlairs	2,669	2,500	18,116	3,782	2,500	4,809	47,502	9,839	4,874	2,416	64,631	84,662	76·3	59
60	Cambuslang	456	200	1,531	1,000	200	1,204	7,297	525	311	220	8,353	13,258	63·0	60
61	Carrick Provident, Maybole	377	260	4,674	..	260	829	3,924	1,136	1	466	5,527	11,200	49·3	61
62	Campbeltown	197	150	857	1,071	150	71	3,440	194	250	31	3,915	4,340	90·2	62
63	Condorrat	68	66	238	269	66	31	533	110	71	37	751	1,633	45·9	63
64	Chryston *a*	118	100	458	314	100	15	1,034	138	80	124	1,376	2,791	49·3	64
65	Cupar	102	120	375	..	120	16	667	125	96	21	909	1,340	67·8	65
66	Carron	239	224	2,506	285	224	518	4,289	990	400	239	5,918	8,629	68·5	66
67	Coalburn District *d*	74	60	225	..	3	10	281	14	1	18	314	225	..	67
68	Dunfermline	5,170	5,100	67,815	..	5,100	26,665	55,024	12,928	4,481	1,960	74,393	133,331	55·7	68
69	Dalziel, Motherwell	2,800	2,600	5,688	45,0[illegible]8	2,600	19,253	68,659	12,352	3,961	3,203	88,175	104,356	84·4	69
70	Darvel *a*	700	660	17,559	3,448	660	14,044	7,945	3,278	903	662	12,788	13,953	91·6	70
71	Dalkeith	593	400	2,339	6,691	400	387	8,745	2,024	629	226	11,624	20,103	57·8	71
72	Dumbarton Equitable	1,869	1,900	39,447	15,429	1,900	32,409	44,351	7,411	3,318	2,438	57,518	69,638	82·5	72
73	Denny and Dunipace	694	630	10,095	1,092	630	2,707	12,519	3,838	1,494	726	18,577	23,200	80·0	73
74	Dreghorn	463	375	1,578	8,492	375	4,349	5,429	1,317	676	560	7,982	12,723	62·7	74
75	Dalry *a*	205	300	2,243	30	300	568	1,368	211	138	54	1,771	3,805	46·5	75
76	Dalmellington Industrial	280	250	1,750	740	250	478	2,507	815	247	281	3,850	7,846	49·0	76
77	Dalmuir	267	270	3,573	4,931	270	691	4,936	692	452	314	6,394	8,550	74·7	77
78	Deanston	93	100	139	30	100	9	761	45	117	18	941	1,690	55·7	78
79	Douglas Park	240	109	920	881	109	632	2,542	406	163	144	3,255	8,717	37·3	79
80	Dunblane	244	250	558	2,049	250	1,238	2,835	542	381	187	3,945	5,549	71·0	80
81	Dykehead and Shotts	458	400	3,383	418	400	767	6,744	1,130	477	445	8,796	11,595	75·8	81
82	Dumfries and Maxwelltown	599	700	5,986	363	700	128	6,106	141	493	416	7,156	10,348	69·1	82
83	Duntocher and Hardgate	321	220	2,670	..	220	364	5,849	685	470	322	7,326	9,800	74·7	83
84	Douglas Provident	92	100	1,130	300	98	9	802	41	77	38	958	1,704	56·2	84
85	Dysart	442	550	1,997	2,245	550	1,009	4,724	782	287	150	5,913	6,882	86·3	85
86	Eastern, Glasgow	5,264	4,000	8,280	31,052	4,000	7,881	56,922	444	30	1,126	58,522	114,934	50·9	86
87	East Wemyss	190	130	871	3,598	130	199	2,267	592	113	97	3,069	5,076	60·4	87
88	East Kilbride	145	132	178	1,023	132	141	1,197	138	68	44	1,447	3,532	40·9	88
89	Edinburgh Roperie, Leith *b*	115	136	185	53	102	24	1,475	47	87	2	1,611	4,436	36·3	89
90	Edinburgh Printing Co.	141	94	6,130	11,886	77	1	..	..	..	..	..	8,021	..	90
91	Elgin	48	108	88	30	108	8	313	1	..	1	315	665	47·3	91

SCOTTISH CO-OPERATIVE WHOLESALE SOCIETY LIMITED—*continued.*

Number.	Name of Society.	No. of Members as per Congress Report.	No. of Shares in Scottish Co-op. Wholesale Society.	Amount of Share Capital as per Congress Report.	Amount of Loan Capital as per Congress Report.	Share Capital in Wholesale Society.	Amount of Loan Capital in Wholesale Society.	Purchases from Wholesale Society.					Estimated Total Purchases, being 20 % less than Sales as given in Congress Report.	Percentage of Purchases from Wholesale to Total Purchases.	Number.
								Grocery.	Drapery.	Boots.	Furniture.	Total.			
				£	£	£	£	£	£	£	£	£	£		
92	Earlston	155	130	868	767	130	46	1,588	45	126	45	1,804	3,072	58·7	92
93	Edenvale, Fife	71	61	456	..	61	44	815	204	14	21	1,054	1,673	63·0	93
94	Falkland Equitable	92	60	607	60	60	23	992	12	..	..	1,094	1,986	50·5	94
95	Fergushill	188	180	1,830	..	180	156	2,810	282	158	106	3,356	3,514	95·5	95
96	Feus, Auchterarder *b*	183	128	1,754	..	96	154	1,653	145	77	39	1,914	2,715	70·4	96
97	Friockheim *a*	173	180	555	..	180	112	963	128	..	23	1,114	2,263	49·2	97
98	Firth of Clyde, Gourock	133	100	586	..	100	85	1,504	95	98	28	1,725	2,410	71·5	98
99	Galston	776	500	11,029	..	500	4,854	6,802	1,744	874	396	9,816	19,775	49·6	99
100	Grahamston and Bainsford	1,496	1,500	24,894	713	1,500	514	21,206	8,300	3,034	1,420	33,960	48,115	70·5	100
101	Grangemouth	860	900	5,000	15,000	900	9,982	14,554	3,292	1,300	942	20,088	26,718	75·1	101
102	Greenock Industrial	404	350	2,462	112	350	181	4,920	888	418	278	6,504	8,851	73·4	102
103	Greenock East End	400	400	2,300	3,844	400	76	6,371	1,295	809	346	8,821	11,394	77·4	103
104	Gavieside	84	110	1,034	181	110	657	662	140	31	16	849	2,778	30·5	104
105	Galashiels, Waverley	1,440	1,370	25,590	..	1,370	1,644	14,499	3,939	1,373	816	20,627	44,207	46·6	105
106	Greenock Central	1,433	1,100	4,719	9,352	1,100	288	21,997	4,259	2,122	1,094	29,472	33,406	88·2	106
107	Glespin, Inches	68	100	456	..	100	47	789	41	52	27	909	1.342	67·7	107
108	Galashiels	1,213	1,200	16,592	10,011	1,200	1,333	9,427	2,630	956	817	13,830	35,206	39·2	108
109	Gallatown, Kirkcaldy	259	200	248	1,100	150	225	2,554	717	..	4	3,275	5,022	65·2	109
110	Gilbertfield	322	200	1,100	2,067	200	327	6,595	582	399	410	7,977	11,637	68·5	110
111	Glenboig	156	130	707	242	130	152	1,955	182	128	87	2,352	5,742	40·9	111
112	Gorebridge, Hunterfield	474	200	1,890	2,286	150	148	11,933	2,561	930	234	15,658	21,571	72·5	112
113	Glengowan	243	176	1,659	..	176	401	2,473	617	276	207	3,573	6,289	56·8	113
114	Guardbridge	118	100	708	..	100	288	1,719	268	235	35	2,257	2,939	76·7	114
115	Glenbuck	138	40	7,346	..	40	565	2,007	6	64	64	2,141	3,081	69·4	115
116	Galashiels Coal	780	770	1,146	..	770	48	1,589	4	..	..	1,593	2,319	68·6	116
117	Govan Victualling *b*	265	200	865	..	200	279	2,625	580	449	202	3,856	8,230	46·8	117
118	Greengairs	138	180	821	350	180	301	1,307	490	204	72	2,073	4,622	44·8	118
119	Haddington	790	950	1,343	412	950	384	7,726	1,403	553	394	10,076	14,804	68·0	119
120	Hamilton, Chapel Street	439	400	2,494	..	400	189	4,636	681	420	154	5,891	10,244	57·5	120
121	Hurlford	550	480	5,000	1,172	480	3,938	5,162	305	217	42	5,726	9,077	63·0	121
122	Howwood	103	100	1,600	..	100	258	1,435	291	364	143	2,233	3,589	62·2	122
123	Hurlet and Nitshill	211	200	448	2,944	200	243	3,010	294	268	222	3,794	5,862	64·7	123
124	Hillwood, Ratho	462	500	3,378	138	500	931	5,953	887	423	323	7,586	11,060	68·5	124
125	Hawick	3,531	3,500	48,388	2,501	3,500	11,649	29,805	6,304	2,025	2,185	40,319	95,735	42·1	125

SCOTTISH CO-OPERATIVE WHOLESALE SOCIETY LIMITED—*continued.*

Number.	Name of Society.	No. of Members as per Congress Report.	No. of Shares in Scottish Co-op. Wholesale Society.	Amount of Share Capital as per Congress Report.	Amount of Loan Capital as per Congress Report.	Share Capital in Wholesale Society.	Amount of Loan Capital in Wholesale Society.	Purchases from Wholesale Society.					Estimated Total Purchases, being 20 % less than Sales as given in Congress Report.	Percentage of Purchases from Wholesale to Total Purchases.	Number.
								Grocery.	Drapery.	Boots.	Furniture.	Total.			
				£	£	£	£	£	£	£	£	£	£		
126	Hamilton Central	797	690	4,135	2,471	690	1,727	15,787	1,814	861	827	19,289	23,322	82·7	126
127	Hamilton Palace Colliery	230	300	1,305	547	300	1,396	5,069	953	375	263	6,660	7,974	83·5	127
128	Hallside	187	125	414	421	125	205	4,478	367	281	180	5,306	7,151	74·1	128
129	Holygate, Broxburn	241	200	3,133	35	200	1,703	2,720	532	219	138	3,609	6,318	57·1	129
130	Hill of Beath *f*	..	100	..	..	25	16	355	65	50	37	507	..	..	130
131	Irvine and Fullarton	137	100	407	257	100	295	1,516	223	143	141	2,020	2,630	76·9	131
132	Inveraray *c*	..	60	..	..	60	126	957	5	..	2	964	..	..	132
133	Innerleithen	320	290	3,788	1,497	290	393	4,942	1,336	579	372	7,029	12,988	54·1	133
134	Johnstone	1,039	1,000	19,413	303	1,000	5,245	15,763	3,780	2 043	578	22,164	30,403	72·9	134
135	Jedburgh	518	500	8,206	..	500	3,625	4,550	1,102	343	316	6,311	10,800	58·4	135
136	Juniper Green	457	430	7,114	..	430	1,824	9,363	2,657	961	467	13,448	17,020	79·0	136
137	Kilmarnock Equitable	3,595	3,300	63,816	1,395	3,300	15,689	51,360	5,011	1,711	1,818	59,900	72,092	83·0	137
138	Kirkland	69	100	573	218	100	60	1,166	145	37	27	1,375	2,048	67·1	138
139	Kinross and Vicinity *b*	135	115	297	..	115	63	387	68	..	3	458	1,442	31·7	139
140	Kinning Park, Glasgow	9,008	8,500	42,878	50,578	8,500	31,570	117,313	11,298	7,513	3,467	139,591	211,580	65·9	140
141	Kilbarchan	400	390	5,656	1,030	390	1,857	7,159	1,089	539	312	9,099	12,647	71·9	141
142	Kelty	972	500	14,756	..	500	3,458	16,928	2,892	608	924	21,352	33,575	63·5	142
143	Kilwinning	304	130	3,412	121	130	67	4,538	1,033	453	303	6,327	8,094	78·1	143
144	Kirkintilloch	664	620	6,779	..	620	1,711	9,504	1,705	831	403	12,443	17,730	70·1	144
145	Kettle	204	233	772	247	233	123	1,503	194	105	41	1,843	2,697	68·3	145
146	Kettle Baking	416	390	1,298	..	390	150	1,638	..	..	..	1.638	3,105	52·7	146
147	Kingseat	1;951	200	600	1,309	200	748	1,865	489	320	66	2,740	6,222	44·0	147
148	Kilbirnie	594	500	10,039	20,534	500	5,486	10,631	1,285	594	617	13,127	19,659	66·7	148
149	Kelso	158	170	926	1,200	170	140	1,194	27	87	39	1,347	2,295	58·6	149
150	Leadhills	152	134	518	..	134	65	1,348	81	136	86	1,651	3,907	42·2	150
151	Lennoxtown Friendly Victualling	185	190	1,430	1,211	190	769	2,464	501	268	154	3,387	6,249	54·2	151
152	Lochgelly	911	800	20,445	..	800	8,946	18,257	3,459	1,056	1,042	23,814	35,577	66·9	152
153	Lanark Provident	796	700	11,594	..	700	7,274	10,059	2,086	836	333	13,314	17,566	75·7	153
154	Leslie and District	774	760	12,438	85	760	7,954	9,642	1,984	616	356	12,598	15,322	82·2	154
155	Leslie Old	227	210	1,728	861	157	741	2,085	648	236	108	3,077	2,675	..	155
156	Laurieston	244	200	2,992	..	200	1,431	3,729	705	168	169	4,771	7,367	64·7	156
157	Leavenseat Industrial	74	100	297	1,603	100	1,402	1,098	161	45	55	1,359	2,361	57·5	157
158	Linwood	166	180	619	1,891	180	549	2,057	817	422	219	3,515	6,849	51·3	158
159	London Road, Glasgow	680	650	1,583	2,608	650	632	9,237	782	618	182	10,919	18·002	60·6	159

SCOTTISH CO-OPERATIVE WHOLESALE SOCIETY LIMITED—*continued.*

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								Grocery.	Drapery.	Boots.	Furniture.	Total.			
				£	£	£	£	£	£	£	£		£		
160	Longcroft	237	200	3,273	..	200	1,075	2,194	522	219	147	3,082	5,754	53·5	160
161	Lochwinnoch	117	135	1,009	..	135	169	662	65	15	78	820	1,898	73·1	161
162	Leith Provident	4,517	4,000	30,538	19,137	4,000	12,378	54,012	14,538	3·681	2,211	74,442	105,870	70·3	162
163	Law *b*	210	200	1,899	..	200	1,492	1,969	307	133	121	2,530	7,072	35·7	163
164	Larkhall *b*	371	340	1,726	97	340	81	2,895	814	255	191	4,155	8,660	47·9	164
165	Lassodie	183	303	1,183	329	303	354	1,434	406	168	34	2,042	5,449	37·4	165
166	Larbert	240	200	4,364	..	200	702	2,887	1,184	518	319	4,908	6,603	74·3	166
167	Langholm	444	447	3,229	1,003	447	797	4,434	558	209	321	5,522	13,116	42·1	167
168	Leven Reform	413	390	2,602	..	390	1,085	5,326	1,540	639	302	7,807	11,307	69·0	168
169	Largs *a*	124	85	324	379	85	10	711	167	112	59	1,049	1,695	61·8	169
170	Larkhall Victualling	554	500	3,254	3,639	98	60	2,597	637	733	212	4,179	15,030	27·8	170
171	Mauchline	472	410	8,446	751	410	6,153	3,621	1,815	467	468	6,371	9,398	67·7	171
172	Menstrie	177	180	3,235	..	180	1,532	2,495	459	200	171	3,325	4,670	71·1	172
173	Moffat Mills	120	60	1,659	72	60	392	2,197	434	179	193	3,003	4,994	60·1	173
174	Markinch	670	650	6,710	..	650	2,526	9,518	2,799	1,058	282	13,657	19,684	69·3	174
175	Milngavie	341	200	2,504	50	200	860	5,982	649	388	235	7,254	10,997	65·9	175
176	Millport	130	130	678	170	130	286	1,175	247	214	102	1,738	2,141	81·1	176
177	Musselburgh Industrial *a*	152	200	606	..	200	109	1,741	385	115	65	2,306	4,215	54·7	177
178	Musselburgh and Fisherrow	1,032	1,067	9,727	1,741	1,067	2,678	16,330	3,796	1,315	663	22,104	31,170	70·9	178
179	Muirkirk	561	100	1,210	2,795	100	648	8,026	1,364	812	257	10,459	14,019	74·6	179
180	Maryhill Industrial	317	300	974	1,161	300	147	4,014	157	174	93	4,418	8,146	54·2	180
181	Methil *a*	173	200	740	..	200	136	2,136	528	183	69	2,916	5,079	57·4	181
182	Newmilns	860	860	15,344	6,011	860	12,129	9,576	3,166	1,056	698	14,496	23,107	62·7	182
183	Northern District, Edinburgh	2,322	2,350	19,840	3,270	2,350	2,394	2,8201	5,917	2,236	829	37,183	55,903	66·5	183
184	Newtonshaw	568	550	8,744	..	550	1,496	4,912	1,039	251	349	6,551	15,948	41·0	184
185	Newtonshaw Industrial	266	100	2,994	..	100	380	995	809	271	174	2,249	8,193	27·4	185
186	Norton Park, Edinburgh	1,054	1,000	4,894	3,600	1,000	488	11,391	2,992	1,077	249	15,709	24,278	64·7	186
187	Newmains and Cambusnethan	838	300	4,578	..	300	1,293	3,561	298	208	177	4,244	15,319	27·7	187
188	Niddrie *a*	152	217	361	566	217	460	3,311	415	184	72	3,982	4,992	79·7	188
189	Newton Mearns	170	140	868	727	140	782	2,812	435	317	142	3,706	5,076	73·0	189
190	Newton	300	260	1,060	1,221	260	841	6,851	240	353	323	7,767	10,048	77·3	190
191	Newarthill	224	200	3,234	..	200	1,040	3,300	660	170	193	4,323	7,237	59·7	191
192	New Cumnock	231	140	663	1,499	140	123	2,123	354	345	118	2,940	4,963	59·2	192
193	Ochilvale, Alva	200	200	1,300	..	150	2	104	1	..	3	108	3,200	33·7	193

SCOTTISH CO-OPERATIVE WHOLESALE SOCIETY LIMITED—*continued.*

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								Grocery.	Drapery.	Boots.	Furniture.	Total.			
				£	£	£	£	£	£	£	£	£	£		
194	Overtown	187	120	1,358	..	120	471	2,236	508	178	162	3,084	6,102	50·5	194
195	Old Cumnock ... *a*	100	120	186	..	120	27	974	155	136	39	1,304	1,778	73·3	195
196	Portobello	456	450	2,420	8,189	450	3,583	8,552	1,245	456	233	10,486	10,549	99·4	196
197	Paisley Equitable	1,263	1,200	3,091	13,658	1,200	2,982	23,010	10	1,200	71	24,291	31,866	76·2	197
198	Penicuik	1,762	1,700	42,787	..	1,700	22,970	26,024	7,797	2,897	1,769	38,487	56,560	68·0	198
199	Port Glasgow	442	400	1,836	3,781	400	582	5,963	1,276	564	249	8,052	10,043	80·1	199
200	Paisley Provident	4,230	4,000	13,867	56,701	4,000	16,444	55,070	46	4,546	2,754	62,416	102,134	61·1	200
201	Pollokshaws	743	300	3,360	130	300	444	9,532	333	355	211	10,431	20,726	50·3	201
202	Perth, City of	3,882	3,600	10,380	45,550	3,600	13,563	53,363	16,418	5,240	2,948	77,969	119,389	65·3	202
203	Peebles	467	450	4,669	4,191	450	560	5,665	2,370	895	843	9,773	17,343	56·3	203
204	Port Glasgow Provident	590	500	1,735	3,481	500	2,755	7,056	1,088	550	96	8,790	10,194	86·2	204
205	Prestonpans	317	270	1,649	..	270	2,655	5,520	1,312	418	123	7,373	9,389	78·5	205
206	Plains ... *b*	139	140	176	1,435	140	528	2,096	405	193	161	2,855	4,438	64·3	206
207	Patna	104	110	508	..	110	30	1,781	392	218	162	2,453	3,333	73·6	207
208	Perth Coal	1,006	300	655	1,190	300	29	456	10	..	..	466	5,387	8·6	208
209	Parkhead and Westmuir Econ.	618	680	3,726	5,774	680	214	4,397	1,733	870	300	7,300	13,002	56·1	209
210	Possil Park	329	300	550	689	300	197	3,478	23	14	73	3,588	8,080	44·4	210
211	Pathhead and Sinclairtown	520	332	2,465	2,200	332	319	6,504	1,405	537	240	8,686	9,454	91·8	211
212	Peacock Cross, Hamilton	158	160	221	299	160	208	2,202	263	183	105	2,753	4,034	68·2	212
213	Paisley Underwood Coal	234	200	1,666	4,939	200	3,011	7,941	55	..	11	8,007	11,114	72·0	213
214	Progress, Glasgow ... *c*	213	196	83	..	24	75	259	1,107	181	320	1,867	1,867	100·0	214
215	Redding	1,462	1,450	34,950	..	1,450	23,211	25,506	5,370	1,889	1,375	34,140	50,115	68·1	215
216	Renfrew Equitable	387	400	2,451	3,852	400	2,374	7,377	1,479	1,236	412	10,504	16,375	64·1	216
217	Rigside Provident	55	75	223	..	75	117	704	25	34	27	790	1,194	66·1	217
218	Radnor Park	209	200	1,546	492	200	378	4,754	741	338	266	6,099	8,334	73·1	218
219	Rawyards ... *b*	163	43	1,067	..	43	14	984	182	66	49	1,281	5,717	22·4	219
220	Riccarton Junction ... *a*	48	50	273	..	50	13	445	..	..	77	522	1,564	33·3	220
221	St. Rollox, Glasgow	1,126	700	1,865	1,607	700	152	14,649	684	1,168	319	16,820	20,792	80·8	221
222	St. Cuthbert's, Edinburgh	13,197	13,000	169,240	5,320	13,000	102,661	179,206	39,397	9,039	4,834	232,476	351,463	66·1	222
223	Strathaven	353	280	2,253	2,137	280	806	2,740	1,063	397	247	4,447	7,255	61·2	223
224	St. George, Glasgow	5,798	5,000	12,020	17,466	5,000	9,007	67,810	8,874	4,897	1,923	83,504	125,256	66·6	224
225	Skaterigg	295	300	442	5,066	300	4,048	4,945	1,219	568	259	6,991	10,311	67·8	225
226	Skinflats	215	190	7,034	..	190	6,298	4,606	739	240	210	5,795	8,315	69·6	226
227	Strathkinness	99	90	334	..	90	18	907	23	..	4	934	1,697	55·0	227

SCOTTISH CO-OPERATIVE WHOLESALE SOCIETY LIMITED—*continued.*

Number.	Name of Society.	No. of Members as per Congress Report.	No. of Shares in Scottish Co-op. Wholesale Society.	Amount of Share Capital as per Congress Report.	Amount of Loan Capital as per Congress Report.	Share Capital in Wholesale Society.	Amount of Loan Capital in Wholesale Society.	Purchases from Wholesale Society. Grocery.	Purchases from Wholesale Society. Drapery.	Purchases from Wholesale Society. Boots.	Purchases from Wholesale Society. Furniture.	Purchases from Wholesale Society. Total.	Estimated Total Purchases, being 20 % less than Sales as given in Congress Report.	Percentage of Purchases from Wholesale to Total Purchases.	Number.
				£	£	£	£	£	£	£	£	£	£	£	
228	Stevenston	269	230	880	2,144	230	618	5,062	743	434	278	6,517	7,286	89·4	228
229	Selkirk Equitable	323	300	3,319	2,240	300	250	3,371	892	257	404	4,924	8,051	61·1	229
230	Stirling	1,366	600	9,797	318	600	1,664	11,218	2,099	881	506	14,704	23,987	61·3	230
231	Shettleston	1,202	1,100	2,879	6,210	1,100	705	14,343	3,004	1,356	964	19,667	30,850	63·7	231
232	Stonefield Independent, Blantyre	288	300	1,360	440	300	499	4,573	722	499	160	5,954	9,435	63·1	232
233	Selkirk	789	825	9,380	3,931	825	2.467	9,410	2,640	1,152	671	13,873	23,631	58·7	233
234	Stenhousemuir Equitable	569	530	11,637	. .	530	2,760	11,044	2,696	1,251	749	15,740	18,314	85·9	234
235	Stenhousemuir Baking	677	640	4,741	. .	640	925	3,606	. .	. .	15	3,621	5,228	69·2	235
236	Scotstoun and Whiteinch	421	220	1,559	507	220	132	5,444	1,126	522	220	7,312	11,094	65·9	236
237	Slamannan	1,654	1,400	2,960	11,133	1,400	1,101	6,685	867	25	302	7,879	44,090	17·9	237
238	Tillicoultry *a*	1,112	1,250	16,086	. .	1,250	10,308	10,173	2,945	867	643	14,628	17,956	81·4	238
239	Tillicoultry Baking	947	900	7,021	. .	900	1,239	4,704	. .	. .	1	4,705	6,254	75·2	239
240	Thornliebank	444	450	1,820	11,556	450	4,969	5,755	1,187	802	580	8,324	15,663	53·1	240
241	Thurso Industrial	1,201	200	8,504	. .	200	1,130	6,478	1,807	534	223	9,042	13,680	66·0	241
242	Troon	279	238	1,769	1,621	238	657	2,552	254	237	185	3,228	4,154	77·7	242
243	Tullibody and Cambus	128	120	2,490	. .	120	955	1,588	292	143	82	2,105	2,824	74·5	243
244	Tollcross	395	220	770	6,977	220	340	6,489	1,345	768	397	8,999	12,824	70·1	244
245	Tranent	1,132	1,000	3,684	11,923	1,000	4,185	10,807	3,889	700	514	15,910	34,874	45·6	245
246	Tarbrax	115	40	479	43	40	220	2,310	449	181	228	3,168	4,873	65·0	246
247	Townhill Industrial	295	400	1,142	. .	400	87	1,679	310	217	43	2,249	5,667	39·6	247
248	Uphall *b*	122	200	1,314	24	200	23	1,711	326	93	77	2,207	2,874	76·7	248
249	Uddingston	564	530	1,854	4,339	530	1,163	11,115	1,898	881	641	14,535	17,089	85·0	249
250	Vale of Leven (Alexandria)	3,048	2,900	9,375	63,239	2,900	45,155	45,832	13,680	4,127	2,439	66,078	92,228	71·6	250
251	West Wemyss	232	200	3,116	30	200	899	4,406	702	272	107	5,487	7,701	71·2	251
252	Westbarns	72	60	221	96	60	114	983	138	30	9	1,160	1,601	72·4	252
253	West Calder	2,493	2,030	35,073	3,275	2,030	22,213	40,147	9,456	2,927	2,783	55,313	96,483	57·3	253
254	Walkerburn	288	285	5,968	. .	285	1,576	5,287	1,796	615	366	8,064	15,120	53·3	254
255	Wanlockhead	368	352	2,451	. .	352	1,500	2,510	300	176	101	3,087	5,142	60·0	255
256	West Benhar	726	200	4,789	. .	200	1,666	9,916	1,679	581	447	12,623	16,156	78·1	256
257	Wishaw	246	180	1,649	630	180	262	2,999	1,001	419	234	4,653	70,461	66·0	257
258	Wick and Pulteneytown	426	465	1,397	1,000	138	5	227	54	. .	50	331	2,754	12·0	258
	Total	183,159	164,692	1,671,021	770,515	162,514	800,540	2,369,625	446,410	177,631	112,201	3,105,867	4,780,574	64·9	

Congress Report figures are from the: *a* Co-operative Union returns for 1894. *b* Registrar's returns for 1894. *c* No returns. *d* Seven weeks' trade. *e* Goods sold at a little over cost price. *f* Just commenced business. * Actual.

SCOTTISH CO-OPERATIVE WHOLESALE SOCIETY LIMITED.

FEDERATED SOCIETIES.

Number.	Name of Society.	No. of Members as per Congress Report.	No. of Shares in Scottish Co-op. Wholesale Society.	Amount of Share Capital as per Congress Report.	Amount of Loan Capital as per Congress Report.	Share Capital in Wholesale Society.	Amount of Loan Capital in Wholesale Society.	Purchases from Wholesale Society.					Estimated Total Purchases, being 10 % less than Sales as given in Congress Report.	Percentage of Purchases from Wholesale to Total purchases.	Number.
								Grocery.	Drapery.	Boots.	Furniture.	Total.			
				£	£	£	£	£	£	£	£	£	£		
1	Drapery & Furnishing, Glasgow..	304	300	6,007	11,140	300	2,525	381	17,703	5,773	2,069	25,926	31,614	82·0	1
2	East Fife United Baking, Cupar.	7	20	245	..	19	3	1,163	..	..	..	1,163	1,169	90·9	2
3	Hamilton Baking	7	20	2,007	3,765	20	356	8,761	2	13	74	8,850	9,157	96·6	3
4	Paisley Manufacturing..........	1,457	1,300	19,336	35,314	1,300	13,150	261	17,292	2	538	18,093	49,535	36·5	4
5	Scottish Farming	275	200	4,776	7,774	153	13	1,227	..	4	23	1,254	9,429	13·3	5
6	United Baking, Glasgow	62	161	21,754	84,865	161	30,215	11,4968	134	120	860	116,082	144,594	80·2	6
7	Federated Baking, Chapelhall ..	8	20	905	4,189	20	857	6,145	..	..	12	6,157	7,982	77·1	7
8	*Scottish Co-operator* Newspaper..	27	20	70	..	20	3	106	..	..	..	106	445	23·8	8
	Total	2,147	2,011	55,100	147,047	1,993	47,152	133,012	35,131	5,912	3,576	177,631	253,925	69·9	

SCOTTISH CO-OPERATIVE WHOLESALE SOCIETY LIMITED.

SOCIETIES NON-MEMBERS, BUT WHO HAVE PURCHASED FROM WHOLESALE DURING 1895.

Number.	Name of Society.	No. of Members as per Congress Report.	No. of Shares in Scottish Co-op. Wholesale Society.	Amount of Share Capital as per Congress Report.	Amount of Loan Capital as per Congress Report.	Share Capital in Wholesale Society.	Amount of Loan Capital in Wholesale Society.	Purchases from Wholesale Society.					Estimated Total Purchases, being 20 % less than Sales as given in Congress Report.	Percentage of Purchases from Wholesale to Total Purchases.	Number.
								Grocery.	Dra-pery.	Boots.	Furni-ture.	Total.			
				£	£	£	£	£	£	£	£	£	£		
1	Aberdeen Northern	13,457	..	69,951	..	..	42	2,688	629	173	257	3,757	262,977	1·4	1
2	Auchtergaven *c*	..	..	..	..	..	7	51	..	..	..	51	..	..	2
3	Auchterarder Baking *b*	277	..	186	180	..	6	122	..	..	..	122	1,310	9·3	3
4	Arbroath United Butcher Meat	12	..	600	..	..	..	36	..	..	..	36	2,380	1·5	4
5	Bridgeton Old Vict. and Baking	1,023	..	3,008	..	..	4	405	..	383	..	788	49,499	1·5	5
6	Carnoustie	1,003	..	6,111	..	..	15	1,196	151	..	52	1,399	16,496	8·4	6
7	Carnoustie Equitable *a*	268	..	489	1,685	..	18	255	3	..	6	264	5,256	5·0	7
8	Carronhall and Kinnaird *b*	245	..	426	742	..	..	25	..	..	..	25	3,487	0·7	8
9	Dunning	65	..	115	..	..	16	70	..	..	..	70	460	15·2	9
10	Eastern Dundee *a*	4 956	..	21 190	..	..	95	10,195	110	43	440	10,788	127,513	8·4	10
11	Edinburgh Civil Service *b*	6,506	..	6,506	1,956	..	16	4,659	..	..	253	4,912	176,625	2·7	11
12	Freuchie	165	..	949	100	..	18	48	55	..	14	117	3,202	3·6	12
13	Freuchie New	94	..	470	..	..	15	26	68	..	24	118	2,072	5·6	13
14	Forth Provident	8	..	..	..	..	2	57	75	3	4	139	145	95·8	14
15	Kirriemuir	1 097	..	4,757	..	..	66	828	24	..	29	881	17,459	5·0	15
16	Kirkcaldy	311	..	804	..	..	4	126	..	..	..	126	5,552	2·2	16
17	Leven Industrial	587	..	3,998	159	..	25	204	..	..	..	204	5,990	3·4	17
18	Montrose *c*	..	..	..	..	..	19	344	..	..	..	344	..	..	18
19	Montrose Baking and Trading	1,248	..	2,795	..	..	15	205	..	..	..	205	11,577	1·7	19
20	Northern, Forfar	331	..	517	1,135	..	..	4	..	..	..	4	6,043	0·06	20
21	Newhaven, Pier Place *c*	..	..	..	..	..	6	207	14	..	1	222	..	..	21
22	Oakbank	303	..	2,715	1,531	..	33	281	..	..	42	323	11,191	2·8	22
23	Peterhead	133	..	182	..	..	3	14	8	..	..	22	1,214	1·8	23
24	Strathisla *a*	410	..	1,207	..	..	6	84	..	75	..	159	6,559	2·4	24
25	United, Brechin	1,080	..	11,727	83	..	..	93	5	..	1	99	27,912	0·3	25
26	Westport, Arbroath	2,206	..	24,115	..	..	5	360	..	..	..	360	38,723	0·9	26
27	West Townend, Forfar	308	..	739	..	..	1	180	..	..	..	180	5,036	3·5	27
	Total	36,073	..	163,557	7,571	..	437	22,773	1,142	677	1,123	25,715	788,678	3·2	

a Co-operative Union returns for 1894. *b* Registrar's returns for 1894. *c* No returns.

SCOTTISH CO-OPERATIVE WHOLESALE SOCIETY LIMITED.

SOCIETIES THAT HAVE MADE NO PURCHASES FROM THE WHOLESALE DURING 1895.

Number.	Name of Society.	No. of Members as per Congress Report.	No. of Shares in Scottish Co-op. Wholesale Society.	Amount of Share Capital as per Congress Report.	Amount of Loan Capital as per Congress Report.	Share Capital in Wholesale Society.	Amount of Loan Capital in Wholesale Society.	Purchases from Wholesale Society.					Estimated Total Purchases, being 20 % less than Sales as given in Congress Report.	Percentage of Purchases from Wholesale to Total Purchases.	Number.
								Grocery.	Drapery.	Boots.	Furniture.	Total.			
				£	£	£	£	£	£	£	£	£	£		
1	Airdrie Bread	717	..	928	750	..	..	..	..	..	..	..	3,512	..	1
2	Auchinheath	343	..	1,179	..	..	..	..	..	..	..	..	12,222	..	2
3	Auchtermuchty Coal	186	..	150	..	..	..	..	..	..	..	..	740	..	3
4	Burntisland Bread *b*	275	..	1,384	..	..	..	..	..	..	..	..	1,476	..	4
5	Blackford *b*	54	..	178	..	..	..	..	..	..	..	..	825	..	5
6	Banff *a*	298	..	803	100	..	..	..	..	..	..	..	2,287	..	6
7	Carronshore Baking *b*	221	..	951	150	..	..	..	..	..	..	..	2,239	..	7
8	Comrie *a*	105	..	319	..	..	..	..	..	..	..	..	1,539	..	8.
9	Coalsnaughton Industrial *a*	90	..	717	..	..	..	..	..	..	..	..	2,247	..	9
10	Dalry Baking	343	..	253	..	..	..	..	..	..	..	..	1,671	..	10
11	Darngavil *b*	81	..	427	..	..	..	..	..	..	..	..	2,320	..	11
12	Dundee Coal	700	..	292	136	..	..	..	..	..	..	..	1,294	..	12
13	Don (Port Elphinstone) *a*	426	..	2,124	800	..	..	..	..	..	..	..	6,917	..	13
14	Edinburgh Bread *b*	692	..	1,272	400	..	..	..	..	..	..	..	2,731	..	14
15	Fife Meat *b*	96	..	920	..	..	..	..	..	..	..	..	5,039	..	15
16	Forfar East Port *b*	191	.	201	652	..	..	..	..	..	..	..	2,905	..	16
17	„ Coal	1,025	..	880	..	..	..	..	..	..	..	..	2,486	..	17
18	„ Free Trade *b*	414	..	632	..	..	..	..	..	..	..	..	7,023	..	18
19	„ High Street	285	..	481	..	..	..	..	..	..	..	..	4,363	..	19
20	„ Victoria Coal *a*	731	..	528	..	..	..	..	..	..	..	..	1,466	..	20
21	Glasgow Friendly Bread *b*	2,988	..	1,494	..	..	..	..	..	..	..	..	4,735	..	21
22	Kilmarnock Industrial	562	..	2,712	..	..	..	..	..	..	..	..	9,373	..	22
23	Kilsyth	234	..	683	..	..	..	..	..	..	..	..	8,283	..	23
24	Lennox, Dumbarton *b*	336	..	437	229	..	..	..	..	..	..	..	5,046	..	24
25	Monifieth Coal *b*	70	..	36	..	..	..	..	..	..	..	..	108	..	25
26	Newburgh & Mount Pleasant Bkg.	288	..	545	..	..	..	..	..	..	..	..	1,120	..	26
27	Rosewell	196	..	494	..	..	..	..	..	..	..	..	7,552	..	27
28	Rutherglen Victualling & Bkg. *b*	398	..	518	1,170	..	..	..	..	..	..	..	14,303	..	28
	Total	12,345	..	21,538	4,387	..	..	..	..	..	..	..	115,822	..	

a Co-operative Union returns for 1894. *b* Registrar's returns for 1894.

Modern Christian Socialism.

(From 1848.)

BY THE REV. JOHN GLASSE, M.A., D.D., OLD GREYFRIARS' CHURCH, EDINBURGH.

> "I will make a man more precious than fine gold: even a man than the golden wedge of Ophir."—Isa., xiii. 12.

IT is difficult for most of us to believe in revolutions. We hear about them taking place in other lands, and we read about them in history, just as we do about earthquakes, but can hardly associate them with our own country. France for long enjoyed a reputation in connection with them, and we found it easy to forget that Britain had not only exiled one monarch, but beheaded another. Revolutions, happily, belong to the abnormal, and there is less likelihood of their occurrence as reason prevails in a community; but after all they are often simply a violent way of doing a proper thing, and we rejoice in the effects of the storm after it has spent its fury. It was so in 1848. The Government of Louis Philippe had become hopelessly reactionary, and was trusting to 100,000 soldiers to crush the popular aspirations for parliamentary reform. This proved to be a sitting on the safety-valve of social order, and an explosion occurred on the 22nd February. It drove the king into exile, and brought new men into power. A Provisional Government was formed, of which Louis Blanc and another Socialist, named Albert, were members. They represented the modern element in politics, and emphasised their relation to the industrial condition of the people. Their proposals were moderate and reasonable. Work was limited to ten hours a day, sub-contracting was abolished, and a minimum wage demanded. It is needless to refute the misrepresentations circulated about the national workshops. So far from their being industrial experiments originated by Socialists, they were organised and controlled by the enemies of Louis Blanc for the express purpose of discrediting his ideas; all of which has been fully confessed by the person made responsible for their failure. The chief trouble at this time arose from a section of the National Guard belonging to the wealthier classes. A popular government could not allow them, as they desired, to make their regiments exclusive, and for this refusal they threatened rebellion. It was made the occasion by the opposite party of a demonstration, and 200,000 citizens marched to the Hôtel de Ville to support authority. The Government, however, including Louis Blanc, would neither receive nor return any answer to a deputation, even from their professed defenders, so long as they retained their arms. Paris was, in fact, electric, and the storm burst on the passing of a resolution to close the national workshops, thus forcing men from eighteen to twenty-five into the army under the whip of starvation. A conspiracy was forthwith suspected, and it was resolved to arrest fifty-six of the supposed leaders; but the writs were not issued for some hours after the announcement had been made, and by this time (23rd June) they were behind the barricades. The attack on the insurgents was delayed in order to mass the troops at special points, but the interval was improved by the citizens. Streets were turned into fortresses, and only after four days' hard fighting did victory declare itself for the soldiers. The slaughter was worse for the officers and men than any battle under the Empire, and among the slain were two generals. The killed and wounded were reckoned at 8,000, but many more must have perished in the insurrection. There were, no doubt, atrocities alleged against the rebels, and they are possibly true, for criminals on such occasions mix with the populace, but "Death to Robbers!" was written all over the walls, and they could at least excuse themselves for their folly by the frenzy of the moment. What shall we say of the victors? They made 14,000 prisoners, of whom 1,000 died of gaol fever, while many were shot down like dogs in cold blood and with demonic delight. (Kelly's "History of 1848," p. 78.) We have the testimony of Renan to their vengeance. The correspondence between him and his sister has been recently published, and in one of the letters he writes of "the wanton outrage and cruelty of the bourgeoisie." Their newspapers were full of lies. They dared not describe the scenes at the Luxemburg that froze his soul as he gazed upon them. After witnessing them, the September massacres perpetrated by the middle classes of 1792 became intelligible to him. Paris, however, was not by any means a city of fiends in 1848. There is another extremely interesting letter by Renan to his sister, under date July 1st. He will not confess himself to be a disciple of Louis Blanc, for all new ideas are narrow and partial. He considers Socialism to be true in its principles but false in their expression, and yet the day, he believes, is not far distant when, freed from exaggerations and chimeras, it will come to be recognised as just and right. One must, in self-defence, destroy the class making war on wealth. It is not, however, to be done by vindictive massacres, but by moral education and sufficient well-being. "How can you wonder," he asks, "that we should have a little indignation against the egoists who refuse to consider these things in their political economy, who persist in making this science only the science of wealth, and refuse to see in such necessities a demand for sacrifices? How can you wonder that we desire to abandon this golden age of stock-jobbers and speculators, where mercantile cares wholly absorb one, and where intelligence is extinguished under bags of money? These are my principles. I think that it is time to destroy the exclusive reign of capital and to associate labour with it; but I also think that the means of doing so have not yet been found, that no system will furnish them, and that they will come forth ready made by force of circumstances. . . . It is this faith in humanity, this devotion to its improvement, and consequently to its happiness, that I call the new religion."

It was in the air, and everyone was not so cautious in his statements about it as Renan. His letter is a revelation, but it becomes even more significant when we learn, as he confesses, that even then he had resolved never to fight, to remain theoretical, and to conceal his opinions.

SOCIALISM IN PARIS IN 1848.

Socialism was at this time on most friendly terms with Christianity. The relation of the one to the other was generally recognised. "Modern civilisation," said Buchez, "has altogether arisen from the Gospel." This sentiment attracted the Socialists to Christianity, and the Catholics to Socialism. The latter freely confessed in their papers that "the situation had become intolerable, and that the economic condition of France must be changed" ("L'Ere Nouvelle"). Pictures of Jesus might be seen in the resorts of workmen, with the motto "The first representative of the people." Banquets were everywhere the fashion. There was one advertised at 5 sous (2½d.). An attendance of 2,000 was expected. It suggested to a Republican paper "the Last Supper of Jesus without Judas." They became most numerous about Christmas. We find such toasts as the following: "Au Christ, père du Socialisme!" "A l'avènement de Dieu sur la terre!" "A Saint Just, Martyr de Thermidor!" "Au Christ vivant, à la France!" But these were not peculiar to Paris. They drank at Lyons the same Christmas "To all the martyrs of Socialism, from the Calvary of Jerusalem to the dungeon of Vincennes!" as well as "To modern Christians!" The Socialists very properly drew distinctions between the poor and the rich clergy, but many of the latter insisted on its being the duty of the state to provide labour. Others simply used the opportunity against their natural enemies belonging to the middle classes. Men like Veuillot, the editor of *L'Univers*, told them that after confiscating the property of the church they had left no defence for the property of the individual, and that for one to believe in property after he had ceased to believe in God it was necessary to be a proprietor. But while they thus railed against the conduct of the middle classes they also sneered at the proposals of Louis Blanc. Pius IX. condemned "the pernicious inventions of Communism and Socialism." It was not, however, his anathema that crushed the movement, but the wrangling of the sectaries among themselves.

COLLAPSE OF SOCIALISM.

Mazzini wrote with a certain amount of truth a few months afterwards: "This tendency to cut up into fragments that which ought to harmonise as a whole is the radical vice of French Socialism." ("Europe: Its Condition.") In the end of 1848 Louis Napoleon Bonaparte was made President of the French Republic by 5,534,520 votes. He solemnly swore to remain faithful to it during four years, but reaction was the order of the day, and he broke his oath by the *coup d'état* on the 2nd of December, 1851. He was made President for ten years by a vote of seven millions and a half, and on the 2nd of December, 1852, entered Paris as Emperor. In 1853 Louis Reybaud wrote an article in the "Dictionnaire de L'Economie Politique," where he spoke of Socialism as "a sickly hallucination." It was now dead, and he had only "to pronounce its funeral oration." Everything had certainly been done to kill it by its friends as well as by its foes, but such movements have an element of necessity about them that makes it impossible for the grave to triumph over them. The year 1848 will ever remain memorable in the history of Socialism. It passed out of dreamland and Utopia to become scientific and political. It was formerly identified with either a theocracy (*e.g.*, Paraguay) or an aristocracy (*e.g.*, Saint Simonianism), but henceforth it allies itself to democracy, and appears before the world as the revolt of the poor against the rich. This was, no doubt, also the meaning of Chartism, but it failed to sufficiently realise that political power did not of itself secure social amelioration. The two movements were now brought together, and the period of reaction proved itself a period of consolidation. Reformers looked with serious misgiving on these doings in Paris. They were supposed to compromise the cause of progress. Mazzini was indignant. He attributed their failure to the "small centres and sects," as well as to false conceptions of life and its mission. He quite understood the problem of the age, but was eager for the unification of Italy, and felt that Socialism was likely to alarm the liberals and republicans in whom he trusted. "To the emancipation of the slave," he writes, "has succeeded that of the serf, that of the serf must be followed by that of the workman." It must, however, be confessed that with all his talk about duty he preferred the immediate to the ideal, the particular to the universal. The reign of the middle class in a united Italy was of more importance than the emancipation of the proletariat. Louis Blanc was wiser than Mazzini, and quite as religious. George Sand gave him to understand this in one of her letters. "At heart," she writes, "I know you are as much of a Socialist as I am, but you put off the question of the future until better times. . . . Were I a politician I should be inflexibly stern. . . . I do not believe in momentary utility, we pay too dearly for it on the morrow for any real utility to be in it." Mazzini had been unjust in his indignation against the Socialists. George Sand admits that they were not without faults, but she saw no improvement in the party of Ledru Rollin from which he expected so much. It is inevitable that those who have known starvation should be concerned about a maintenance, but it is grossly untrue to insinuate that they are more materialistic than those who by egoism and luxury make it impossible for them to obtain it. Mazzini chose an evil hour for his bitter criticism.

CONDITION OF BRITAIN—LORD SHAFTESBURY.

It is time, however, to consider the relation of these events to Britain. The agitations of Owen had already come in contact with Chartism, and many were therefore ready to sympathise with them. We learn from the life of Lord Shaftesbury how these were regarded by the respectable members of society. "The two great demons in morals and politics of Socialism and Chartism," he writes, "are stalking through the land" (1840). This language hardly does credit to his intelligence. He remarks, on a visit to Manchester (1841), "The clergy here, as usual, are cowed by capital and power." When the Collieries Bill affecting the labour of children was being pressed through committee, "Sinners," he writes, "were with me, saints against me." "His chief opponents," says his biographer, "belonged to that party which appeared to look for a social millennium to be brought about by the rigid application of the dogmas of political economy, and who considered that he was endeavouring to limit freedom of contract, and in other ways unduly to interfere between capital and labour." Bright was the leading advocate of the millowners. It is said in the Delegates' Report that he addressed the House of Commons at considerable length, in a style "perhaps the most vindictive towards the working classes ever used in the British Parliament." There was, according to him, no need for a Factory Act. The manufacturing districts might be characterised by a high mortality and a low morality, but there was at least "general prosperity." "Bright," said Shaftesbury, "was ever my most malignant opponent." Gladstone was little better. He always voted against him. "He was the only member who endeavoured to delay the Bill which delivered women and children from mines and pits, and never did he say a word on behalf of the factory children until, when defending slavery in the West Indies, he taunted Buxton with indifference to slavery in England." The cry of the factory children made little impression on the clergy. "They are," Lord Shaftesbury complains, "in many cases frigid, in some few hostile. So it has ever been with me. At first I could get none; at last I have obtained a few, but how miserable a proportion of the entire class. The ecclesiastics, as a mass, are perhaps as good as they can be under any institution of things where human nature can have full swing; but they are timid, time-serving, and great worshippers of wealth and power. I can scarcely remember an instance in which a clergyman has been found to maintain the cause of labourers in the face of pew-holders."

SOCIALISM AND THE CHURCH.

The testimony of Lord Shaftesbury is not that of an enemy, and yet people are indignant that Socialists are not enthusiastic supporters of the church. It must be confessed that they were growing indifferent towards it, and that too often they confounded Christianity with the clergy. They had seldom hitherto done so. One is certainly not surprised that there should have been in Paris a revolt against Rome. It was to the credit of the Socialists that, though religious, they would not become reactionary to obtain the influence of ecclesiastics. The movement found men in different camps on the subject of churches. Many of the Catholics were perfectly sincere in their expression of sympathy, and this naturally led Socialists to favourably consider Catholicism, but it was not likely to affect their Protestantism or their scepticism. Infidels remained infidels, Catholics remained Catholics, but it became easier to understand and tolerate each other through their common interest in Socialism. It has, as a matter of fact, taught many Secularists that Christianity is not to be identified with its dogmatic or ecclesiastical expressions, but with its ethical teaching and equalitarian tendencies; while so far from its having any natural alliance with atheism it had, hitherto, hardly ever been advocated by atheists, and was, in fact, felt by men like Proudhon and Mazzini to be utterly inconsistent with it. "If," writes Professor Nitti, "the Socialist democracy of the day is almost entirely atheist, it is less owing to any opposition between the Christian and Socialistic ideals than to the fact that religion has frequently been employed by the bourgeois class to arrest the progress of Socialism among the masses." ("Catholic Socialism," p. 26.) Writers who might have known better have set themselves to confound the accidental with the essential, and have thus simply poisoned the public mind with reference to the religious attitude of Socialism. The demand for justice must ever be considered the true acknowledgment of deity. The Socialists believed in it, the economists denied it. Labour was treated by the latter as a commodity to be regulated by the law of supply and demand; but labour meant the life of the people, and any law that tended to cheapen and degrade it could never of necessity be associated with the character of God. This was the protest of Socialism, and for this reason it stirred the hearts of Christendom.

CHRISTIAN SOCIALISM IN ENGLAND.

Mr. J. M. Ludlow, writing in 1848 from Paris to the Rev. F. D. Maurice, declared that "Socialism was a real and very great power, which had acquired an unmistakable hold not merely on the fancies but on the conscience of the Parisian workmen, and that it must be Christianised, or it would shake Christianity to its foundation precisely because it appealed to the higher and not to the lower instincts of these men." ("Maurice's Life," Vol. I., p. 458.) Most of the Socialists were, as we have seen, Christians, though not churchmen. The reply of Maurice is worthy of him: "We have no right to talk of atheistic France, atheistic Germany, true as the charge may be even now, fearfully as it may be proved hereafter. Are not we atheistic? Is not our Christianity semi-atheistic? . . . Where is God in our theories? Do not let us preach a Protestantism, a Catholicism, a Christianity without God!" Industrial iniquity cannot be reconciled with the moral order of the world, and therefore with the divine idea on which it depends. It was a period of great excitement in Britain as elsewhere. Kingsley came up to London to see the Chartist gathering at Kennington Common on the 10th April. There was much folly connected with it, and it turned out a fiasco. Bad leaders and wrong methods may, however, retard, but can never arrest a good movement. The collapse of Chartism stirred not merely the sympathies of Maurice and his set, but of Disraeli and the Young Englanders. Are the opinions of the latter not well described in "Coningsby" and "Sybil"? The followers of Maurice started a paper and assumed a name. *The Politics of the People* became the organ of the Christian

Socialists. One of the most interesting members was Gerald Massey, then a lad of twenty, with a mild halo of genius and romance about him. Indignation, accumulated through centuries of injustice, finds expression in the poems written by him at this period.

Kingsley was one of the most active. He generally signed his contributions as "Parson Lot," because the patriarch was said to be as one that mocked to his sons-in-law. He agreed with the Chartists in their aims, and confessed his sympathy with the condition of the people, but his writings are more valuable for inspiration than guidance. He was the modern Bayard of the Socialist movement. There was never any cowardice, but there was sometimes little reflection about his conduct, and from sheer disgust at trade selfishness his denunciation of competition often degenerated into railing. He was rather feudal than democratic in his ideas of society. There must be classes, but no class should live in degradation. The workers were entitled to a certain measure of comfort, and it was the duty of their social superiors to secure it for them, but the apathy of the aristocracy to its duties never seems to have shaken his confidence in them. "A true democracy," he contends, "needs a Church (by which we suppose he means a feudal institution, as in England) and Queen, and gentry. . . . I consider peasant proprietorship a very great evil, barbarising the peasantry. . . I believe the landlord a necessary element, first in civilisation, and next in agriculture." He had a mild antipathy to total abstinence, asceticism, and pharisaism, but he reserved the fury of his wrath for free trade and *laissez-faire*. "Next," he writes, "you have the Manchester school, from whom heaven defend us; for of all the narrow, conceited, hypocritical, and anarchic and atheistic schemes of the universe the Manchester one is exactly the worst." In another place, referring to the *nouveaux riches* of Manchester during the fifty years ending 1848, he declares that "they were not even free traders till they found that cheap corn meant cheap wages. . . . The mere fact that life in Manchester was shortened seventeen years in comparison to life in the country is very awful." The creed of the Christian Socialist really resolved itself into two points, a negative and a positive, the evil of competition and the necessity of co-operation. "I do not see my way," says Maurice, "further than this. Competition is put forth as the law of the universe. That is a lie." "It is my belief," writes Kingsley, "that not self-interest but self-sacrifice is the only law upon which human society can be grounded with any hope of success." So confident was he in the truth of these opinions that he wrote to a friend (Buller): "A century hence mankind will be looking back on the social philosophy of the present day as they do upon the witch manias of our forefathers."

One cannot, however, help regretting that this firm faith and generous enthusiasm should have been allowed to evaporate in sentiment. The outcome of Christian Socialism was insignificant. "The movement," writes Mr. Holyoake, "did not even 'scotch' the 'ponderous snake' of competition." ("Rochdale Pioneers," p. 1.) A "Society for Promoting Working Men's Associations" was formed, but it was not by opening tailor shops that one could ever cure the sweating system. It was a mere lopping away of a twig from the tree of industrial exploitation. Their failure is attributed by Kingsley to "their democratic constitution and anarchy." But a mere change of management could never have made them efficacious. One must, however, be grateful to the Christian Socialists for the assistance rendered in connection with "The Industrial and Provident Partnership Bill." It passed 11th June, 1852, chiefly by the efforts of Mr. Slaney, and by subsequent alterations has removed the vexatious obstacles to co-operative trading. They also did a great service by their protest against competition, and by their general diffusion of sound ideas. *Politics for the People* had a duration of two months, but it forms a book of nearly 300 pages, and numbers among its contributors Maurice, Kingsley, Ludlow, Dr. Guy, James Spedding, Arthur Stanley, Arthur Helps, R. C. Trench, Mr. Strachey, S. G. Osborne, Professor Conington, and Archbishop Whately. *The Christian Socialist* appeared 2nd November, 1850, but Maurice wrote little for it. Kingsley contributed eight papers on "Bible Politics, or God Justified to the People," besides a few ballads and sonnets. He complains of "the heterogeneous lot connected with Christian Socialism." The sale of the paper was 1,500. But it, too, had a brief existence, and was changed in the beginning of 1852 into *The Journal of Association.*

The literary activity of the movement, however, was by no means confined to these papers. Maurice preached sermons inspired by it which were afterwards published, and Kingsley, maddened by the revelations of Mr. Mayhew in the *Morning Chronicle* on "London Labour and the London Poor," wrote his pamphlet on "Cheap Clothes and Nasty." This was soon followed by a novel, "Alton Locke," on the same subject, while in another, "Yeast," published a little afterwards, he criticised the condition of the agricultural labourer. It was impossible for such enthusiasm to last, and one is not surprised at the political apathy of the next ten years. Maurice and Kingsley may have been the most prominent members among the Christian Socialists, but one must regard Ludlow as the originator of the movement, while others like Hughes and Neale were equally in earnest. There was often considerable friction among them, and the position of Maurice was frequently responsible for it. "To the perplexity of some of those who worked with him," writes the Rev. J. Llewelyn Davies (*Contemporary Review*, March, 1884), "Mr. Maurice insisted, in accordance with his characteristic faith, that they were not trying to reorganise society, but only to discover the bases on which the actual society of which they were members was built. It was divine: personal greed of money was no part of the social system. It was destroying it." This is a very fair example of the attitude that he would sometimes assume. What does it mean? The social system was not only imperfect, but it was, both from the point of view of legislation and industry, largely an exhibition of ignorance and selfishness. It, no doubt, represented other and better qualities; but it was an alloy, and was vitiated, according to his own confession, by the principle of competition. The laws of the universe are, no doubt, divine, but human arrangements or social systems are often sadly out of harmony with them. There must thus be elimination and reconstruction. Progress is simply the persistent realisation of the ideal through the actual, and this consists of a constant struggle against institutions identified with the greed of classes or individuals. Maurice was far too much of a quietist. He felt himself quite unfit for the work of organisation, but cannot be excused for obstructing in this direction the efforts of others. We are afraid that the first impression received by Ludlow after meeting him, that he was "a good man but very unpractical," must have been confirmed by intimacy.

With all their differences, however, the Christian Socialists were agreed in condemning the doctrine of the economists. "It was a fundamental axiom of their science," said Ludlow, "that men should seek their own interests and do their own will, instead of doing the will of their Father and loving their neighbour as themselves; in which it is the rule that the more a man asks the less shall be given him, the more he shall need the more advantage shall be taken of him." (Judge Hughes, in *Christian Socialist*, March, 1885.) We must be grateful for such a protest. Carlyle had no doubt already made it with an energy peculiarly his own. It is nothing to tell us about the indirect benefits of competition. One can always say something in favour of every system that has prevailed among men, but because fetishism and cannibalism had their uses and were inevitable that is no reason why we should maintain or restore them. We have risen through them to a higher conception of life, under which they cannot be tolerated. So will it be with competition. It still seems an excellent principle to some, but it offends the moral sense of others, and will gradually prove its inferiority to co-operation not only in industry but also in ethics.

There was thus in Christian Socialism a fine combination of courage and caution, but it was received in high places with contempt and execration. The *Quarterly* (September, 1851) identified it with Revolutionary Socialism. The accusation was too absurd. In the previous year, however, the movement had been severely criticised in the *Edinburgh Review* by W. R. Greg. Kingsley's pamphlet was referred to as "disreputable rant." The economists were "thinkers," the Socialists "feelers," but, strange to say, political economy is defined as "benevolence under the guidance of science." Its science was displayed in the contention that the wants of society can only be determined by competition, while its benevolence was shown in making paupers of the unemployed.

The critics and journalists, however, soon discovered that they had been needlessly alarmed over these social experiments. The economists, in fact, came rather to regret their failure, for both the *Quarterly* and the *Edinburgh* confessed a few years later (1863–4) "the essentially conservative tendency of such societies." Maurice never changed in his conviction that the right principle of business was co-operation, but he had no confidence in their ability to give it a wise application. It was receiving this in the north of England from the example of the Rochdale Pioneers, and he considered it best for each of them to serve the movement in his own way. Others might realise it in business, they could best promote it by education, and the last act of these Christian Socialists was the institution, 7th February, 1854, of the Working Men's College.

CHRISTIAN SOCIALISM IN GERMANY.

We now come to a somewhat barren period in politics. The attention of society was absorbed in other affairs. The Great Exhibition was over, the Crimean War was in full swing, then came the Indian Mutiny, to be followed at a brief interval by the great struggle of the United States. After the excitement in connection with these events had subsided an agitation was started for a Reform Bill. It passed in 1867, the year in which the whole country was shocked by atrocities committed by trade unionists at Sheffield. But the date is even more memorable for the publication by Karl Marx of the first volume of his great book, "Das Kapital." The International had been founded in 1864, at a meeting held in St. Martin's Hall. It proved to be simply a resurrection of Socialism, and was mainly confined to the Continent. Marx was the genius of it. The movement had for the time passed over to Germany, and that country had undergone a long preparation for it. Fichte must be considered a pioneer. "It is," he affirms, in his "Science of Right," "the fundamental principle of every rational form of government that each person shall be able to live from the results of his labour." Socialism as a body of doctrine owes much to Professor Winkelblech (Marlo) and Rodbertus, while as early as 1847 Marx and Engels had published the Manifesto of the Communist Party, and one is still surprised at the maturity of its statements. Lassalle, however, was the agitator of the movement. He was killed in a duel in 1864, and his life is well summed up by the words on his tombstone, "Thinker and Fighter." He laid special emphasis on "the iron law of wages," whereby the reward of labour tends constantly to fall to the bare means of subsistence, and asked a hundred million thalers from the State to start workshops for the emancipation of industry. He was also an advocate for a united Germany, and this may have won him the confidence of Bismarck, but, in any case, the latter favoured his scheme. Socialism, in fact, became popular with the Conservatives. It was adopted by the court chaplain, Dr. Stoecker, but it developed under him into Anti-Semitism, and did not in this form enjoy the confidence of the people. Its leaders were looked on as mere instruments of the Government, and certainly stood in a very dependent position towards it. The Church of Rome often compares favourably with the Protestant clergy in this matter. Contrast, for example, the attitude of the Presbyterian ministers towards the crofter agitation in the Highlands with that of the Catholic priests towards the agrarian struggle in Ireland. It is very much the same on the Continent with regard to Socialism. The Catholics have been far more friendly to it than the Protestants, and their conduct has been in truest harmony with the soundest policy. It is certain that the Social Democrats will not be gained over by it to the Romish Church, but this sympathy will prevent many of the people connected with it from going over to the Social Democrats, and, if we are to believe Paul Göhre's narrative, "Three Months in a Workshop," it is more than time for all churches to make the attempt. He is General Secretary of the Evangelical Social Congress, and has taken some trouble to qualify himself for the position. After finishing his course in theology he donned the garb of a workman to make a practical study of the social problem. His book is the result. It deals with industrial life in Saxony, but there is little peculiar to this state in the condition of labour. Most of the people lived on the brink of poverty, and found their occupation irksome and monotonous. They were not much concerned about anything ideal, and believed in a kind of naturalism. "What Jesus Christ has been in the past," they often said, "Bebel and Liebknecht will be in the future." Social Democracy seems, in fact, to be, reasoned or otherwise, the creed of the workshop. All may not so understand it as to give expositions of it, but they believe in it and vote for it.

Göhre has great respect for many of its supporters in middle life. They have proved themselves to be "prudent, sensible, and enlightened men" by the way they have conducted their trade unions and benefit societies. A controversy that Göhre had with another workman is extremely interesting. "What is true about Christ," he said, "is that he was a man like me. He wanted to help his fellow-men, and he gave his teaching the shape the times called for. He made them religious. Religion to-day is only good for cowing and keeping down the people—great blockheads!" (Page 161.) "It was," he adds, "the widespread conviction that the church was a very desirable and powerful police system of the existing state, which zealously and skilfully keeps it from falling into ruins. Christ was generally regarded as the first Socialist" (p. 173). "The parsons are entirely to blame for the people hating the church. They so often side with the rich" (p. 175). Respect and reverence for Jesus Christ is all that is left of their former faith, but surely this is much. For them he is "the great social reformer, who sought by means of religion, but in vain, to bring in that golden age to the world for which they, too, are striving: which they, more fortunate than he, will surely inaugurate! But before his great personality they are all hushed and still" (p. 188).

It is not, therefore, without hope that the Catholic Church girds herself to the work of social amelioration. She will never accept the ideals of Social Democracy, but it is in the line of her traditions to substitute corporations for competition, and to promote all measures likely to secure a minimum of comfort to the people. This is very much what one means by Catholic Socialism. The progress of the Social Democrats in Germany since 1871 has been startling. One deputy was then returned to the Reichstag, but in 1893 there were forty-five. In 1871 they cast 101,927 votes, while in 1890 they had 1,341,587, and in 1893 they were 2,000,000. That was the answer given to the persecution of Bismarck, and if a dissolution took place they would, according to Liebknecht, poll a million more. They would thus be by far the strongest political party in Germany. No church of any pretensions or dimensions can afford to ignore such a body. The Catholics had an able leader in Monsignor von Ketteler, archbishop of Mayence. He belonged to the old school, and was feudal in his sympathies. Scorn is expressed by him in a book published in 1864 for the Liberal doctrine of self-help, and he mainly supported the scheme of Lassalle. The right to property must be recognised, but cannot be invoked against a fellow creature in need. He does not think that it falls within the province of the state to raise the money for industrial workshops, but the church might obtain the funds by an appeal to the faithful. The first meeting of the Ultramontane Socialist Societies was held at Crefeld, 1868, but the views of Ketteler were received with reserve. The Catholics found their chief supporters among the rural proprietors and the religious peasantry. Canon Moufang, however, went further than his superior. He demanded the interference of the state for the assistance and protection of the worker against being defrauded by the capitalist. It should prohibit altogether the labour of women and children (Nitti's "Catholic Socialism," p. 139). The actual leader, however, of the Catholic party in the Reichstag is Canon Hitze. He would return to the gilds or corporations abolished in Germany in 1868. One must look for a solution to the social organisation of trades. "The reign of Individualism and Liberalism" is characterised as "despotic hypocrisy," and the future, he maintains, belongs to Socialism in one form or another. The gilds were restored as "autonomic industrial associations" in 1881. Many restrictions were put on labour in 1888 by the Reichstag. Among others it was forbidden on Sundays and festivals. Hitze asked for a legal maximum day for adults. We must, he argues, accept the fundamental principle of Socialism, and any settlement must not be sectarian but national. Alms are not enough. One needs organisation of labour. "It is, however," writes Professor Nitti (p. 172), "quite evident that the doctrines held by the Catholic Socialists spring for the most part from those of the State Socialists, and that both parties, though starting from different points, and having somewhat dissimilar ends in view, yet fully mean to reach those ends by the same path." But we must not confound State Socialism with Social Democracy, the one is paternal, the other fraternal, while Liebknecht, in a recent criticism of the two, said that the former was "Capitalism in the worst sense." The Catholics of Germany number about one-third of the whole population. They are well organised, and are all agreed as to the necessity of state intervention for any substantial reform. Father Kolping busied himself from 1847 till the year of his death (1865) in forming Catholic journeymen clubs, the members of which must not belong to the Social Democratic associations. They now number nearly a hundred thousand. A society of masters was also formed by Hitze, and they are much more sympathetic towards Socialism than those employers professing Protestantism (p. 188). Similar associations have been started by Baron Von Schorlemer-Alst among the peasantry. They have a membership of twenty thousand, chiefly in Westphalia, and by means of co-operation fight against low prices, as well as secure cheap commodities. The same principle has also been adopted by the small vine growers on the Rhine. These movements owe their initiation mainly to the higher classes.

AUSTRIAN CHRISTIAN SOCIALISM.

Socialism in Austria exhibits itself specially as Anti-Semitism. The Jews are not only the supreme arbiters of trade and of the banks, but they are working actively to become the masters of the soil. Such circumstances have given great influence to Catholic Socialism in Austria, and it has also been extremely fortunate in having for its leaders two men like Professor Rudolph Meyer and Baron Von Vogelsang. The former believes in universal suffrage as a rational method of social improvement, and is greatly in favour of state regulation of industry. He would fix a minimum wage and a maximum day. One must consider in industrial production the collective interests of society. Restrictions should be put on the breaking up of landed estates, and residence insisted on. They would thus prevent small proprietors from being bought out by wealthy foreigners, a measure no doubt directed against the Jews. Vogelsang is not less thorough. The mirage of liberty was used by the middle classes to deceive the people. Capitalism is defined as "the maxim that all wealth is individual property without burdens or duties, and is destined to procure its proprietor the largest possible amount of advantages without any regard for the good of the community or of the men employed in procuring them. . . . Industry," he continues, "may now be said to labour almost exclusively for capitalism, and the towns and cities belong to it from attic to basement" ("Catholic Socialism," p. 220). He does not, however, approve of land nationalisation, but is strongly in favour of state intervention. The corporations were abolished in Austria in 1859, and restored in 1883. The Catholic deputies agree with the Socialists in their attacks on capitalism, and have also voted for a minimum wage. "In no country in the world have Socialistic doctrines so profoundly taken root as in Austria" (Professor Nitti, "Catholic Socialism," p. 232).

CHRISTIAN SOCIALISM IN SWITZERLAND.

The movement was well represented in this country by Monsignor Mermillod, Bishop of Lausanne and Geneva. Preaching as early as 1868 in the fashionable church of Ste. Clotilde in Paris, he disgusted his wealthy audience by his outspoken remarks on the subject of Socialism. "The workman," he declared, "feels drawn towards Democratic Socialism by a natural need of dignity and independence, by a legitimate desire for justice." "The struggle for life," he said on another occasion, "having now been established as the law of human relations, and labour being considered as a commodity, the existence of the working people has become subject to the free action of material force, and they have been reduced to a condition that recalls pagan slavery" (Professor Nitti, "Catholic Socialism," p. 240). One of the best representatives, however, of Catholic Socialism in Switzerland is an eminent layman, Gaspard Decurtins. The spirit with which he approaches the social problem may be learned from his remark: "Hunger is neither Catholic nor Protestant!" He instituted in the interests of labour the Sécrétariat Ouvrier, a bureau for statistics, but the officials must also transmit to the Government any complaints lodged against public functionaries in connection with the application of industrial laws. These officials are paid by the state but appointed by the workmen. Decurtins saw clearly that the labour question was international, and that protective measures to be just must be general.

CHRISTIAN SOCIALISM IN FRANCE.

The Catholics here range themselves under two schools in connection with Socialism. There is that of Le Play and Professor Perin. It rather favours the attitude of the economists, and would limit as far as possible the intervention of the state. Perin thinks the problem to be rather moral than economic. He finds nothing, according to Professor Nitti, "to oppose to the ills of modern society beyond vain formulas like 'The Free Christian Corporation,' 'Christian Co-operation,' 'Christian Employers,' and many other things all Christian, but not more efficacious for that reason." The exponent of the Le Play school is Claude Jannet, and the state, according to him, cannot safely, except in the case of Sunday observance, interfere with labour. Catholic Socialism, however, finds its true leader in Count Albert de Mun. He is everywhere spoken of with respect. There is much in common between his position and that of the Catholic Socialists of Germany. The present system has changed poverty into pauperism. "It has produced the harshest of slaveries, the most iniquitous of inequalities." He pours contempt on *laissez-faire*. Liberalism means not the liberty of justice but of force. He insisted on the Sunday rest, on the prohibition of night work, on the gradual suppression of female and child labour, and on some provision against accidents and sickness. The workman must be regarded as a father, a soldier, and an elector, but to do these duties properly a degree of education is necessary that is only possible by securing him leisure. Mun, therefore, voted for an eight hours' day.

CHRISTIAN SOCIALISM IN BELGIUM.—PROF. LAVELEYE.

Socialism in Belgium has been fortunate in its leaders. Anseele and others have given it a practical turn, and their Co-operative Stores have been conducted with great success.

They are, by means of the profits derived from these establishments, not only able to possess halls for meetings and recreation, but to publish newspapers. Their practicality is further exhibited by their interest in politics, and by the importance they attach to universal suffrage. The Catholics have followed their example in the matter of co-operation. One of their pioneers was François Huet, professor at Ghent, whose "Le Règne Social du Chrétienisme" appeared as early as 1846. He argues that property is essential to liberty, and for that reason a natural right. The evil of modern society consists in having converted it into a monstrous privilege, with the result of practically enslaving the people. The Catholics of Belgium, however, have not accepted the guidance of M. Huet, but talk much with M. Perin about "economic liberty," and fight the Social Democrats at the polls. Laveleye was a disciple of Huet, and has written with much sympathy on Socialism. He was born a Catholic and died a Protestant, but his views on Christianity were always liberal. The ethical is its essential element. Our quotations will be made from his life, recently written by his friend, Count Goblet D'Alviella. The hope of progress is based on faith in God, but he does not accept the authority of Scripture. "What," he asks, "does the Gospel propose for our worship? A God of truth and love. What does it teach? The fraternity of all men, the superiority of the spirit over matter, liberty in and by reason. What does it enjoin? To love our brethren and do to them all the good we can. What ceremonies does it prescribe? None: the adoration of God in spirit and in truth, without any special rites at all. Who will be saved? Not him who believes in the infallibility of the Romish Church or the Immaculate Conception, but blessed are the meek, blessed are those who thirst after righteousness and are persecuted for it. No anathemas for speculative errors; not even for that of the Sadducees who denied the immortality of the soul and the resurrection. But woe to the Pharisees, woe to the hypocrites, woe to the wicked, and those who oppress the poor" (pp. 26, 27). Our civilisation, he held, was bound up with the general acceptance of evangelical precepts as a rule of life, and Christianity in this undogmatic and moral sense, associated as it is with aspirations to freedom and equality, will become the religion of the future (p. 40). He accounts for the origin of Socialism (1) by the ideal of Christianity, and contrasts it favourably with the principle of Darwinism; (2) by the natural tendency to use political in order to obtain social equality; (3) by the dependent position of the workman; (4) by the insecurity of employment; (5) by scepticism about another world; and (6) by militarism. He criticises Socialism very freely and very justly, but his own attitude is best seen in his article against H. Spencer's

"Man and the State." Contempt is there poured on the doctrine of the survival of the fittest as taught by such writers. Spencer had formerly, in his "Social Statics" (chap. ix.), denounced private property in land as equivalent to an attack on one's life or liberty, and Laveleye remembers it against him. We must, therefore, have state interference, but it should be on principles of justice. He reminds Spencer that this is the aim of scientific Socialism, and that so far from desiring to assist the unworthy it is really an attempt to put all in a position to help themselves. He argues that before we can possibly realise the principle of Spencer, and give remuneration according to merit, we must suppress the present system of property. "To assure the application of the Darwinian laws we must abolish the family and the right of succession." ("Le Socialisme Contemporain," p. 397.) It has been the aim of all our moralists and legislators to put right in the place of might, and he repudiates with indignation the injunction that would lead us to look for instruction in conduct to the beasts of the field. "There is," he exclaims, "nothing more odious and degrading. The incomparable sublimity of the Gospel, still, alas! too much ignored by both parties, consists in this ardent desire for perfection, in this aspiration towards an ideal of justice which urged Jesus and his first disciples to condemn the present world. It is from this that has come hatred of iniquity under every form. The more Christianity," he concludes, "will strip herself of dogma to put in relief the ideas of moral and social reform contained in the words of Jesus, the more will societies withdraw themselves from the principles espoused by Mr. Herbert Spencer." His biographer ranks Laveleye among the Socialists of the chair, or those professors who refuse to consider economics as the mere science of wealth and maintain that it is inseparable from morals; but while this no doubt is so his morals are those of the Gospel, and we must, for this reason, look on him as one of the best representatives of Christian Socialism. He is too democratic to favour State Socialism, and too cautious to commit himself without reserve to Social Democracy, but he recognises the necessity of property for liberty, and will not refuse the assistance of the state in securing an equitable share of it to every worker.

CHRISTIAN SOCIALISM IN BRITAIN.

The name of Prof. Laveleye is nowhere better known than in Britain, and he did much by his articles in our magazines to make us familiar with the modern developments of Socialism on the Continent. They were at first treated with derision. It was a malady not likely to affect the British workman, for he had a sure prophylactic against it in his general sagacity. The conclusions of the economists were ranked with those of Newton. The production of wealth was governed by laws as relentless and inexorable as that of gravitation. There was nothing for it but to uphold the sanctity of contract and practise Malthusianism. Carlyle, no doubt, still continued to protest against this position, and Ruskin held up the hands of the prophet. Ireland had already been engrossing the attention of Parliament, and its Church had been disestablished. But this was not enough. The wolves still clamoured after the chariot, and the tenure of land in Ireland was sufficient to excuse their importunity. It had much to do with the demoralisation of the country, and Mr. Gladstone made a sincere attempt to remedy the evil by his bill of 1881. It was distinctly a measure of justice, but it failed to satisfy the members of the Land League, and the agitation for agrarian reform not only still went on among the peasantry of Ireland, but extended also to the crofters of Scotland. It was about this time that Mr. Henry George first visited Britain, but the fame of his book, "Progress and Poverty," had preceded him. It led to a thorough study of the whole question. Societies in connection with it sprang up in all directions, and the result, in many cases, was not merely a demand for land nationalisation, but also for common property in the means of production. The Democratic Federation had been founded in 1881 out of sympathy with the Irish Land League, but soon (1883) identified itself with Social Democracy. Britain had caught the delirium of the Continent, and it spread rapidly. It is hardly possible to exaggerate the fervour of the period. Not a few lived in expectation of the millennium. It was the dream of youth, and experience has since wakened most of the Socialists to reality. They were always ready enough to criticise their own doctrines and methods. This has no doubt led to divisions among them, but it has increased their intelligence. Men came into the movement from all quarters, and naturally brought their ideas about things in general with them. The Secularists did not discard their Secularism, and attempts were made to identify Socialism with atheism. The institution of the family was threatened by others. The danger, however, did not arise from Socialism, but from those who insisted on importing their peculiar opinions into it. The origin of the Fabian Society may be given to illustrate the variety of idea and conduct connected with it, or in other words, the individuality of the movement. It was formed January 4th, 1884, out of a body gathered together to promote the Fellowship of the New Life. They saved themselves, however, from the temptation to morbid self-culture by the study of Socialism. The Church was also from the first identified with it. The Guild of St. Matthew had been founded by Mr. Headlam in 1876, and he had since 1882 been the editor of its organ, *The*

Church Reformer. Its members consisted mainly of High Churchmen, and while in general they endeavoured "to promote the study of social and political questions in the light of the Incarnation," they specially advocated the opinions of Henry George.

There were other Christians, however, throughout the country in sympathy with Socialism, and yet, like Laveleye, rather out of sympathy with clericalism and dogmatism. They also associated themselves with the movement, and were represented by the *Christian Socialist.* It was started in June, 1883, and struggled on to the end of 1891. Its principles were those of the Social Democrats, but its methods professed to be in harmony with Gospel morality. Shelley is praised for realising the importance of self-reform and the evil of violence. There was considerable variety of opinion among its contributors, but all considered Socialism to be the economic expression of Christianity. It is thus, in March, 1886, that the society justified its existence. It was wanted for "non-sacerdotal Christians." They accepted most of the Social Democratic programme, but there was too much about guns and armies in the speeches of its members. The Socialist League again struck a false note about marriage and political action, while there was too much opportunism in the tactics of Fabianism. The society, however, was quite impartial in its criticism. "So far," it continues, "has the Church wandered from her old standpoint that men burning to live and work in Christ's fashion have barely foothold in her borders." They felt that the Christians of the church were greatly in need of being taught what was the practical application of their professed principles. The society held its first meeting in June, 1886. The movement had thus advanced much beyond the position of Maurice, and was to all intents and purposes one in its economic ideas with Social Democracy, but it was pervaded by a sincere conviction of its harmony with Christian principles, and therefore constrained to protest against the identification of Socialism with atheism. The paper was edited with much ability during most of its existence by Mr. Paul Campbell, and this of itself may be taken as sufficient evidence of its fidelity to the principles of Collectivism.

One must, in any reference to Christian Socialism in Britain, acknowledge the great services of the late Cardinal Manning. No church dignitary of modern times was so stout a champion of labour. We naturally associate him with the great bishops of the first centuries. It is true that he would have repudiated, as every Catholic prelate would, the attitude of Social Democracy. The idea was to bring capitalist and worker, like monarch and citizen, under the authority of the Pope. It was the dream of a churchman, and not likely to be realised; but whatever may have been the ambition of Manning, it is impossible to question his sincerity. He was a Socialist because a churchman. There was the one body under the one Lord, constituting them all brethren with mutual obligations and common aspirations. Manning naturally felt with his whole soul that such an institution was diametrically opposed to the doctrines of the Manchester school, with its *laissez-faire* and its non-intervention, its repudiation of all responsibilities either in domestic or foreign affairs. "The next century," he wrote ("Twentieth Century," p. 678, Marseilles, 1890), "will show that human society is greater and nobler than all that which is merely individual. This doctrine, which has its foundation in the laws of nature and of Christianity, is accused of Socialism by the frivolous and the impetuous, as well as by the capitalists and the rich. But the future will call forth into the light of reason the social state of the world of labour." Manning saw clearly how unequal was the strife between capital and labour under a system of free contract. It not only led to the settlement of disputes by strikes, but in almost every case, after ruinous suffering, the labourers were defeated (*Tablet*, 1889). He agreed with the Socialists in affirming that it is the duty of the state to provide work for all, and that the individual when neglected by the state has the right to save himself from starvation by theft. He was also in favour of a minimum wage and a maximum day. "Liebknecht himself," exclaimed a French economist (Molinari), "does not go further." "Certainly, in writing the history of the Catholic Church for the nineteenth century," says Professor Nitti, "the place of honour cannot but be assigned to Cardinal Manning, as having been the first, perhaps, who dared to point out the true social mission of Catholicism, and most surely the only one who had the courage to dedicate his whole life to the research of the sole ideal—the Catholic Church as leader of Socialism and Democracy."

He was well supported in his efforts by Monsignor Bagshawe, of Nottingham, and other prelates on the Continent. The former protests against modern civilisation as based on "the odious individualism of so-called political economy." "No one can deny that there are whole classes of labourers who are obliged, in order to escape starvation, to work for wages which are manifestly unjust and iniquitous. . . . The situation in which labour is now placed by capital is odious and intolerable . . . private right must yield when the common right requires it." ("Mercy and Justice to the Poor," 1885.) These are the words of a tribune. There is every reason to credit these prelates with genuine sympathy for the workers, and they served their church well. It is difficult, for example, to exaggerate the importance of the mission undertaken by Cardinal Gibbons to Rome on behalf of the Knights of Labour. They had been excommunicated by the Pope, but, on receiving a memorial signed by seventy out of seventy-five bishops in the United States, he agreed to revoke the sentence. Catholicism has certainly proved herself wonderfully pliable in such matters. She commits herself to no form of government, and could easily adapt herself even to Social Democracy. Her priests in progressive countries are generally against privilege, and are prepared to make offices in the state, as in the church, the reward of merit and ability. "In all countries, but above all in America," said Monsignor Ireland in an address delivered in 1889 before the Catholic prelates, "the strength of the Church lies in the people. The days of princes and feudal suzerains are gone. . . . Woe to the religion that does not understand this fact! Who has won the masses reigns, and the masses are only to be won through their intelligence and heart. . . . As to that portion of a nation that is distinguished by the insignia of nobility or fortune, we must consider it, not as the people, but only as a small fraction of the people. It has no right to subordinate the masses to its interests, as if the people had no other reason to be. Nobility is nothing. Fortune has nothing that claims respect unless their aims and objects be the greatest good of the greatest number. Do not enslave the masses."

THE POPE'S ENCYCLICAL ON THE LABOUR QUESTION.

Deliverances like these of the eminent prelates that we have quoted fill one with much hope for the salutary influence of the Romish Church in connection with the industrial condition of the people. It is in Italy, however, that, unfortunately, one meets with most indifference to the subject, and the fact is significant. "What wonder, then," asks Professor Nitti, "if the Italian Socialists are in general avowed atheists, and have no faith in the social action of the Church." One can trace the influence of this baneful environment even in the famous Encyclical. There is much about the Socialism of countries like Italy and Spain to prejudice the Pope, and to excuse certain statements in the pastoral. It begins by a recognition of the evil to be remedied. It is attributed to the practice of usury, to the custom of working by contract, and to the concentration of industry. We must not, however, seek the cure in Communism, for man has by nature a right to property. The main tenet of Socialism is affirmed to be community of goods, and must be rejected. The knowledge of the Holy Father is here at fault. Socialists only object to private property in the means of production, and insist on making it common in order that private property may not, as now, be confined to the few. The solution, we are reminded, must be sought in religion. The employer must learn to look on his workman as a Christian, and the wealthy must be taught that they hold their possessions in stewardship. This doctrine, however, is considerably diluted to suit the infirmities of the age. One is only enjoined to give alms out of what remains after having made a becoming provision for his family. There is, in fact, nothing left but the form of the injunction. The Encyclical is rather jealous of any interference with labour on the part of the state, but it is careful not to identify itself with *laissez-faire*, or non-intervention. The state has higher obligations than to enforce contracts and furnish policemen. "It is the province of the commonwealth to consult for the common good," and all government is a trust for the people. The state cannot, therefore, remain indifferent to the condition of the citizens. It must look after health and morals, while "the poor and helpless have a claim to special consideration." Man, it is held, cannot give up his soul to servitude, for it belongs to God, and must not, therefore, remain content with drudgery and degradation. "It is neither justice nor humanity so to grind men down with excess in labour as to stupefy their minds and wear out their bodies." There must be leisure. The poor have a right to live, but this means regular employment and adequate remuneration. The burden of making this provision may be undertaken by associations, but the responsibility for it rests with the state. The faithful are to be encouraged to form societies among themselves for this purpose, and much may be expected from the sensible operation of Trades' Unions. Such in essence is the outcome of the Encyclical on the subject of labour. It is prudent, and so far sympathetic, but it furnishes little guidance and no inspiration. "It proposes remedies," writes Professor Nitti, "which stand in no correlation to the gravity of the evils it bewails." Social reform cannot be got without moral reform, but moral reform must insist on changes in our social institutions. Many Catholics have shown themselves conscious of this, and the feeling is that, though the Pope does not consider it judicious to favour Socialism, he will not seriously interfere with the efforts of the faithful to realise it. They have at least his attitude in America and Ireland to encourage them in this conviction.

EXISTING ORGANISATIONS IN BRITAIN.

This attention of the churches to Socialism is a tribute to its importance, not merely to the truth it teaches, but to the influence it is likely to exercise. They feel that they must reckon with it, and that the prosperity of their own institutions will be affected by it. We have already confessed that many prominent churchmen have been attracted to it rather by sympathy with its principles than by any reasons of policy, and believe that this is specially true about several clergymen in the Church of England. The Guild of St. Matthew no longer exists, but the Christian Social Union has taken its place. It was founded in 1889, and "had its beginnings," according to its secretary, Mr. Percy Dearmer, "in London and Oxford." The Bishop of Durham is its president, but Canon Scott-Holland is its moving spirit. The fact that the centre of its activity in Oxford is Pusey House indicates its leanings towards High Churchism. A majority of the undergraduates, working with a view to holy orders, belong to it, and it issues a quarterly—"The Economic Review." The Union is specially active in spreading literature in the form of sermons and pamphlets, while a new monthly magazine, of some artistic pretension, was started in the beginning of last year (1896). We quote the following from the Annual Report: "Since January, 1895, 241 new members have been elected to the London Branch. There are now 949 members of the London Branch, of whom 652 are resident in London; 198 members of Bristol, Leicester, Brighton, and Rochester Branches. The total membership of the London and Affiliated Branches is, therefore, 1,147. Of the members 42 per cent are clergy, 32 per cent women, and 26 per cent laymen."

The movement has also spread to the United States, and has been joined among others by the Bishop of New York, Dr. Robert A. Holland, Dr. Potter, and W. P. Bliss. The last-mentioned edits "The Dawn," a monthly paper devoted to Christian Socialism. Professor Ely is the secretary. The conditions of membership are that one must be in communion with the Episcopal Church, and claim for "the Christian Law the ultimate authority to rule social practice."

The Union is non-political, and its members are men of various views; some of them are avowed Socialists, while all insist that Christianity has a social as well as an individual aspect. The fact of its being confined to one church, or rather to a section of a church, no doubt narrows its influence. There is also, perhaps, undue emphasis laid by the Union on the importance of studying social problems. This is natural enough in the circumstances, but it needs very little study to convince one of the injustice around him, and he is likely to gain most wisdom in setting himself to correct it. One may seek in books an opiate to dull the promptings of the heart. As Canon Scott-Holland very truly remarks:—"Larger and larger numbers of educated men are growing content to sit by and pick out the weak places in Socialist schemes, while they themselves sadly acquiesce in a situation they condemn." ("The Ground of our Appeal.") We are sure that the Union does not intend to do so. It numbers some excellent men among its members, and is specially fortunate in its president. Every one honours the Bishop of Durham, and his utterances in this connection have been worthy of his reputation. He read an admirable paper on "Socialism" before the Church Congress at Hull, in October, 1890. The central idea of the movement, he held, was "that the goal of human endeavour is the common well-being of all alike, sought through conditions which provide for the fullest culture of each man, as opposed to the special development of a race or a class by the sacrifice of others in slavery or serfdom, or necessary subjection." Wage-labour may be an inevitable step in industrial evolution, but it is not a permanent condition, and therefore we wait "for the next stage in the growth of the state when, in full and generous co-operation, each citizen shall offer the fulness of his own life, that he may rejoice in the fulness of the life of the body." "Nothing," he confesses, "has impressed me more during my years of work than the rapidity and power with which the thoughts of dependence and solidarity and brotherhood, of our debt to the past and our responsibility for the future, has spread among our countrymen. . . . Here, then," he concludes, "lies the duty of the Christian teacher. The thoughts of a true Socialism—the thoughts that men are 'one man' in Christ, sons of God and brethren, suffering and rejoicing together, that each touches all and all touch each with an inevitable influence, that as we live by others we can find no rest till we live for others, are fundamental thoughts of the Law and the Prophets, of the Gospels and the Epistles which he is empowered and bound to make effective under the conditions of modern life." Such a prelate is true to the best traditions of Christianity, and has proved their value by the assistance that he has rendered in trade disputes as well as to the co-operative movement.

We must also notice the Christian Socialist League. It was founded in 1893, with Dr. Clifford as president, and has no leanings towards sacerdotalism. It counts many avowed and active Socialists among its members. A branch of it has been started in Glasgow, and did excellent work last winter by its Sunday services. It believes that Socialism had its origin in Christianity, and will best succeed in alliance with it, but it makes almost nothing of dogma, and lays special emphasis on the ethical teaching of Scripture. "The application of Christian principles," it maintains, "demands the organisation of society on a basis of association and fraternity."

One may also mention, in conclusion, the Labour Church, identified with its founder, the Rev. John Trevor. He was originally a Unitarian minister, and one may from this fact gather an idea of his general attitude. The institution has done much to spread Socialism in several places, but the title is unfortunate, for, while the energies of a church should be distinctly directed to the subject of labour, they should not be engrossed by it.

THE MORAL OF THE NARRATIVE.

A few reflections naturally suggest themselves at the end of such a summary on the general question. It is impossible to give a definition of Socialism, and the attempt to do so has simply led to misleading criticism and miserable wrangling, while the greatest sinners in this respect have often been its staunchest supporters. They would reduce an international movement to the dimensions of a sect, and seem prepared to sacrifice the interests of the community to maintain their own infallibility. Socialism has hitherto been too much burdened and impeded by theories. What do the people know or care, for example, about the nature of value? Is every one prepared to admit that social progress is only determined by economic conditions, and that moral forces count for nothing? Does everyone believe in the wisdom or justice of preaching up a class war for the advancement of a movement intended to benefit all classes, and which looks on the members of all classes as more or less victims of the present system? It is too absurd, but one must, according to some, assent to these conclusions to escape an accusation of heresy. Movements like Socialism cannot, as a matter of fact, be made the subject of dogmatic statement. We all profess that the individual is a citizen, and that as such he must seek his welfare in union with others. The doctrine is sound, but there may be much tyranny in its applications. It is for this reason that Social Democrats look with suspicion on State Socialism. There is a possibility of being too much governed. But what about themselves? Are they so very confident about either Socialism or Democracy? They will, no doubt, answer that Socialism is synonymous with the overthrow of monopoly in industry—that it means placing production under the control of the community instead of a company or an individual, and making us all work under conditions determined by the will of the majority. The Socialists, however, would really be the first to rebel against such arrangements. They would forthwith see a hundred good reasons against them. If liberty demands a basis of property, then this property must be secured to the individual beyond any interference on the part of the community. As society advances the wisdom of the majority will, no doubt, increase; but, in the meantime, it it is not always evident, and its control in matters of conduct occasionally threatens to be rather irksome. The fact is this will of the majority may simply turn out to be a new kind of tyranny, and, therefore, the term Social Democracy, while it indicates very fairly the goal of progress, is very defective as a dogmatic expression. It has not been left for an outsider to make this criticism. None has done it better than Mr. Belfort Bax. "Be this as it may," he writes, "the cultus of the majority in the modern state (and why not in the future?) is an absurdity which can only for a moment go down with the Parliamentary Radical who is wallowing in the superstitions of exploded Whiggery." ("Ethics of Socialism," p. 128.) This is quite consistent, however vigorous, on the part of one who believes in taking "the shortest way" to his destination, but he forgets that this may often turn out the longest, and that it is diametrically opposed to the idea of Social Democracy. We give it simply as an illustration of how hopeless it is to make a creed of Socialism. It is perfectly obvious that if we are to live together we must defer to the opinions of each other, and trust to persuasion for the correction of errors. One may argue till Doomsday over definitions. A system like Socialism suggests the famous logical proposition about motion, and is best solved by walking. The difficulties that one raises over it will disappear in experience, for in lessening the interest to oppress the oppression will gradually vanish, and the liberty that is essential to individuals will readily be granted by a community consisting of individuals able to secure it. We have thus selected Social Democracy for criticism because it is, upon the whole, an excellent expression of party aims. If dogma fails us here it is not likely to succeed anywhere. As we have already said, such movements cannot be confined in phrases or sentences, but represent a spirit and a tendency. Many have felt this about Socialism. "As for me," wrote George Sand, "I confess that I am so wearied, so tired, so fatigued, so distressed to see facts always impeded by words, and the substance sacrificed to the shadow, that I no longer trouble about formulæ, and that had I found one I should part with it very cheaply." ("Letters.") Or, again, to quote Professor Nitti, "Socialism is not a fixed and determinate system, but rather a movement that undergoes modification according to the historical surroundings and economic tendencies of each nation: in this lies the cause of its power and rapid diffusion. It is not circumscribed by any definite formulas, and this very fact, while it daily adds to the number of Socialistic schools, endows them, nevertheless, with a wonderful force of adaptability." ("Catholic Socialism," p. 29.) It is for this reason that one begins to get impatient with the wrangling of the sects, and desires to see a return to the spirit of the Gospel. The Socialism of the Prophets arose from their idea of justice, of the Apostles from their realisation of fraternity. The movement simply resolves itself into a sentiment, sympathy for the disinherited, and a resolution, the overthrow of oppression. There is, no doubt, a body of opinion as to how this can be best accomplished, but to insist on doing it in one way rather than another is to expose oneself to the danger of becoming a sectary or an obstructive. We are agreed in general about the evil to be remedied, and the likely means of cure, but one must in all these things go by experience, and experience delights to discomfit dogmatists.

If this be so, most of the objections brought against Socialism are manifestly erroneous. One may certainly excuse them, for they apply to many Socialists. They identify their own opinions with the movement, and write as if all those associated with it were bound to adopt them. One of the greatest sinners in this respect has been Mr. Bax. We have been assured by him ("To-day," Vol. II., No. 7) that it means, "in industry, Co-operative Communism; in politics, International Republicanism; in religion, Atheistic Humanism." Where does Mr. Bax find the authority for making such a statement? In himself. These are his opinions, and some of them were his opinions before he ever thought of Socialism at all; but they are not the opinions of every Socialist. Communism to most of them is like the millennium to Christians. They would never dream of agitating for such a principle at present. We grant that there would be unanimity on the subject of hereditary titles and government, but as for "Atheistic Humanism," it is perfectly certain that the doctrine would be repudiated by many. Mr. Bax knows this, but would attribute their belief in God to their want of culture or their dread of Mrs. Grundy, and would trust to Socialism to correct it. He is also aware that atheism, as such, has nothing whatever to do with Socialism. "The distinction between God and the world," he writes, "has practically ceased to exist for the educated classes." It may be so; but if so, atheism is not peculiar to Socialism, nor can it be professed by most Socialists, since they have been denied the advantages of education. In another place he assures us that Socialism "is essentially neither religious nor irreligious." ("Socialism and Religion," p. 48.) He then proceeds to explain that it is not religious because it "utterly despises the other world," but it is not irreligious because it brings "back religion from heaven to earth." The fact is Mr. Bax gives most offence by his words. There is nothing peculiar in his philosophy. But one must protest against his dismissal of Theism as "the popular theory of the mounted policeman up above." This is simply the crude talk of Secularism. "To the atheist," he writes, "nature is not like the works and deeds of men, the product of conscious and willing intelligence, but the outcome of an immanent necessity." Be it so. Does he confess man to be a part of nature? If so, does he not admit a law of righteousness operating in the individual and society, and if not, on what does he rest his expectations of progress? Whatever may be the case with those calling themselves Socialists, there seems to us no basis for Socialism at all unless the outcome of this "immanent necessity" be favourable to justice. Dr. Aveling is another advocate of atheism, and maintains that the teachings of Jesus are unfit to regenerate society, because "essentially unscientific." ("To-day," Vol. I., No. 1.) What a conception of life! Truly extremes meet! Salvation formerly depended on orthodoxy, now it depends on science, and yet, judging from the apathy and hostility manifested by science to Socialism, the welfare of society is not much dependent on our familiarity with facts and formulæ. There is really some excuse for the reproach heaped by Christian people on the movement, but it might have been obvious to the more intelligent among them that Socialism had as little to do with the infidelity of Socialists as Christianity has with the selfishness of Christians. It was not only imported into it, but, in so far as it professed atheism, is essentially inconsistent with it, for it demands a moral basis which atheism fails to provide. There is no doubt a certain amount of truth in Laveleye's contention that one of the predisposing causes to Socialism is scepticism about another world. The lot of many is so miserable here that it becomes intolerable with no prospect in the future, but, on the other hand, there is no reason for indifference to the condition of affairs here because of such an assurance about the hereafter. The moral preparation for heaven can, in fact, only be found in social duty, but apart altogether from these considerations it must be obvious to everyone that, however such scepticism may favour Socialism, it exists quite independently of the system.

Another argument against the movement is its relation to the family. Communism was supposed to abolish marriage. The idea of woman under commercialism is as degraded as the idea of society. Because all property was to be held in common she would of necessity be included, being also property. Socialism is not, of course, to be identified with Communism; but if it should ever develop into it, women, from the very nature of the case, would be on a footing with men, and would therefore have the most absolute control over themselves. They, in other words, would possess unqualified private property in their own persons.

They have, no doubt, liberty at present; but it is like that of the proletariat, conditioned by the possibility of starvation. There is no need to argue this subject at any length. Socialism has obviously no doctrine to teach in regard to marriage. It simply seeks to secure a living to women as to the workers, and would thus enable both to make the best of life. This may lead to certain modifications in marriage, but only if individuals should desire them, and they are not likely ultimately to desire them unless convinced that they are beneficial to them. It is the same with reference to children. Socialism has no peculiar theories on the subject. It only insists that children belong to society more than to their parents, and cannot be neglected with impunity. Seeing their condition must affect the future of the state, it should never consent to allow the folly of the individual to destroy the character of those who are to constitute its citizens.

Socialism, therefore, instead of being contrary to Christianity, is thus everywhere in harmony with it. As we have seen repeatedly in this narrative, the quarrel of the people is not with Jesus but with the clergy. The latter have but to be faithful to his precepts to win back their confidence. Socialists may never come to accept the ceremonies and dogmas associated with our churches. That must in the long run depend on the reasons to be given for them, but we may all unite on the moral teaching of Scripture, and this union may do much for the general progress of humanity. Socialism has not flourished on the sterilities of discussion. It must become a religion if it would be a power. Many professed atheists have given unconsciously a beautiful expression of this feeling of social obligation. A French National Guard, for example, fighting at one of the barricades during the Commune, on being asked why he thus sacrificed himself, replied: "Pour la solidarité humaine." (For the good of all.) Such men feel that there is something higher than self, and can die for a principle. They believe in the ideal, and can devote themselves to the universal—but this, after all, is the truest acknowledgment of God. "For he is not a Jew which is one outwardly: neither is that circumcision which is outward in the flesh: but he is a Jew which is one inwardly, and circumcision is that of the heart, in the spirit, and not in the letter: whose praise is not of men but of God."—(Rom. ii., 28, 29.)

American Tariffs.

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IT is not the purpose of this article to argue for or against the principle of Protection. Its object is to explain the growth of protective legislation in the United States, particularly since 1860, and to show some of the effects of high tariff legislation on political morality.

Protection in the United States, in the form in which the Republican party has imposed it upon the country, is more recent than the War of the Rebellion which gave America its first high Customs tariffs. The tariffs which preceded the M'Kinley Act of 1890, which in its turn has been superseded by the Wilson tariff of 1894, were part of the taxation system of the war period of 1861 to 1866, when all federal taxation was abnormally high. The era of high tariffs solely for protective purposes, and of corrupt bargains between the politicians and the manufacturers, dates from the time when these war tariffs, no longer necessary for revenue purposes, were revived by the Republican party in the seventies and the eighties.* From that time also can be dated the trusts and combinations which are now held together in most cases solely by American tariff legislation.

The United States have had tariffs of one kind and another ever since 1789; and it is necessary at least to indicate their character and purpose before tracing the development of the protective legislation of the newer kind.

Between 1789 and the outbreak of the Rebellion in 1861, Congress passed more than thirty tariff Acts; and the question of Protection had been more or less in American politics from the second decade of the nineteenth century, when manufacturing began in New England and in Pennsylvania. In nearly all these tariff Acts revenue for the Federal Government was the paramount consideration. The schedules of most of them were, it is true, drawn so as to protect American industries; but, generally speaking, revenue was the first consideration, and protection to home industries a secondary feature.

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* "Our tariff has undergone twenty-five changes since the war, all in the direction of higher duties."—E. L. Godkin, in the *Forum* for May, 1896.

AMERICAN TARIFFS.

During nearly the whole of the period from 1820 to 1860 the tariff was one of the lines of political division between the manufacturers of New England and Pennsylvania and the cotton and tobacco planters of the Southern States. When there was a tariff in which the protective features were more than usually pronounced, it encountered the hostility of the Democrats from the South, and its protective schedules were revised as soon as the Democrats were in a position to make a change in the tariff laws.

About 1840 the cry against what Americans described as the pauper labour of Europe was first raised with any marked success. Before that time protection had been demanded for the infant industries of the United States. After 1840 the infant industry cry subsided, and the demand was now for protection to American labour. In 1842 there was a tariff Act in which the Protectionists achieved their last success prior to the war. A compromise tariff had been in existence since 1833. Duties under this Act averaged about 20 per cent. In the Act of 1842 the average duties were raised to about 33 per cent, and this Act held good until 1846.

There was then another revision, this time in the direction of a tariff for revenue only. By this Act duties on manufactured goods were brought down to from 25 to 30 per cent; and by another revision in the same spirit in 1857 the average duties were reduced to 20 per cent. This tariff, which lasted from 1857 to 1861, was lower than any preceding tariff since the doubling of the duties in 1812. Americans, when they speak of the period during which they had Free Trade, refer to the years during which the Acts of 1846 and 1857 were in operation, as these tariff Acts were to a greater degree than any which preceded them for revenue only. This, in briefest outline, is the history of the American tariff up to the eve of the War of the Rebellion.

For the purpose of this article the seventy years from 1789 to 1861 may be described as the first period of the American tariff. It was a period when the tariffs were for revenue with incidental protection. The second period may be taken as embracing the War of the Rebellion, and the years in which the immense war debt was being paid. During this time there were high Customs tariffs, as there were high internal revenue taxes to meet the enormous expenses of the war. The third period may be taken as beginning in 1876, when the country was largely free from the burden of the war. Then the manufacturers began to ally themselves with the Republican party, and to furnish it with money for electioneering purposes in return for Protection. After 1876 the Republican party gradually broke away from its early doctrine of a tariff for revenue with incidental protection, and declared itself in favour of a high protective tariff, irrespective of the surplus in the national Treasury or the financial needs of the Government, and was even willing to abandon all the internal revenue duties on tobacco and liquors in order that a high protective Customs tariff might be maintained in the interests of the manufacturers.

Before turning to the second and third periods of American tariff history, some explanation must be given of American political parties in the decade which preceded the war; for unless it is made clear how the Republican party came into existence, and what its sole original mission was, it is not possible to understand the position it now holds in regard to Protection.

Up to 1850 the two parties were Democrats and Whigs. The Democrats were the older party. To them Americans owe the invention and perfecting of most of the exceedingly elaborate party machinery now called into use every four years to elect the President and Vice-President.

The Democratic party, by its history if not by its name, goes back to the early days of the Federal Constitution. Its adherents were then known as Anti-Federalists, and followed the lead of Jefferson, who, in 1801, became the third President of the United States. The party had at first been hostile to the Constitution. When the Constitution was beyond attack, the Anti-Federalists, who, about 1810, changed their name to Democrats, became the advocates of a strict interpretation of the Constitution, and of the doctrine that all powers not actually delegated by the Constitution to the Federal Government were in the hands of the State Governments. They were jealous of any encroachment on the part of the Federal Government, and were the upholders of the doctrine of States' rights. They were also, in theory if not always in practice, opposed to any policy which savoured of paternalism; hostile to internal improvements made at the expense of the Federal Government; and to any interference of the Government with private enterprises and private interests. They were in favour of liberal naturalisation laws, an elected judiciary, and of direct taxation.

The Whigs were the party in opposition to the Democrats from 1834 until the decade which preceded the Rebellion. Before 1834 there had been several parties opposed to the Jeffersonian Democrats. The party which, after 1834, became known as the Whigs had until then been known as the National Republican party. It came into existence about 1824, and was led by Clay and Webster. The Whigs were in favour of internal improvements at the expense of the Federal Government, of protection to American industries, and of indirect taxation. A Whig President was elected in 1836, and again in 1840; but it was not until 1844 that the Whigs formulated their first national programme. They then declared themselves in favour of "a tariff for revenue to defray the necessary expenses of the Government, and discriminating with special reference to the protection of the domestic labour of the country."

The Whig defeat in 1844 was directly due to a new party which was dissatisfied with both the Whigs and the Democrats on the question of slavery. This was the Liberty party. It was strong in the State of New York, and, as it was dissatisfied with Clay, it nominated a third Presidential candidate. It was not possible to elect this candidate; he had little support outside the State of New York; but in New York the Liberty party drew sufficient voters away from the Whig party to bring about the defeat of Clay.

From 1844 onwards slavery became the all-important issue in American politics. The tariff, and direct and indirect taxation, fell into the background. Between 1844 and 1850 Texas was admitted to the Union; the Mexican War was fought, and as a result of the War the United States became possessed of the great stretch of country which lies between Mexico and the Pacific coast. It was the possession of this new Western territory which brought about the Rebellion; for with the new territory came the disturbing question whether slavery was to be confined to the Southern and South-Western States in which it then existed, or whether it was to be allowed to extend itself westward.

The Southern slaveholders demanded that the new territory should be opened to them. The people of the North were determined that slavery should be restricted to the South and South-Western States, to which it was then confined by what is known in American history as the Missouri Compromise. Under this compromise, enacted in 1820, slavery was prohibited west of the Mississippi, north of the State of Missouri. This State was carved out of what was known as the Louisiana purchase, out of Spanish territory, and, with Arkansas, Louisiana, and Alabama, had been allowed to come into the Union as a slaveholding State. The Southern slaveholders were, however, not satisfied with this great extension of territory which followed the Louisiana purchase, nor later on with the admission of Texas as a slave State. They were anxious that slavery should be established in the new territory which the United States had acquired after the War with Mexico in 1846-48; and for five or six years the country was grievously disturbed by the question whether or not the slaveholders should have their way. Ultimately, in 1854, they carried their point; the Missouri Compromise was repealed, and it was left to each new State to be carved out of the Western territory to determine for itself whether it would come into the Union as a slaveholding or a non-slaveholding State.

The outcome of the repeal of the compromise of 1820 was the formation of the Republican party, and the disappearance of the Whigs. Abolition and Liberty parties had been in existence for years prior to the Kansas-Nebraska Act of 1854 ; but they had not drawn to themselves any great national strength. From the time when slavery first became an issue in Federal politics, the Democratic party had gradually shown itself more favourably disposed to the desires of the South than the Whigs. Up to the repeal of the Missouri Compromise in 1854, the Abolition parties drew most of their support from Democrats in the North, because the Whigs were hopeful that their leaders would at last make a stand against the aggression of the slave States. The repeal of the Missouri Compromise finally dispelled this hope, and it was seen that if slavery were to be kept within the then existing limits an entirely new political party would have to be formed.

The Republican party was organised solely for this mission. The men who were its leaders between 1854 and 1860 were not Abolitionists. They undertook to prevent the extension of slavery, and in this great mission they soon had the sympathy and active support of the noblest and best men of the Northern States. The Republicans were not able to elect Fillmore, their candidate for the Presidency, in 1856—the first year in which they put forward a Presidential candidate—but Lincoln was elected in 1860, and with Lincoln's election came the revolt of the Southern States and the War which lasted from 1861 to 1865.

Lincoln was elected President in November, 1860. At that time the low tariff of 1857, known in American economic history as the Walker tariff, was in operation. There had, however, been deficits in the Federal revenue between 1857 and 1860, owing to depression in trade, and to meet them the tariff of 1857 was revised. This revision was carried out in the session of 1859–60 by a Committee of Ways and Means of the House of Representatives, of which Mr. Morrill was chairman. He was a Republican, and the Republican party was already a powerful force in Congress. To attract the voters of Pennsylvania to the Republican party at the then approaching Presidential and Congressional elections, the changes made in the tariff were in the direction of Protection.

The Bill embodying these changes was not taken up in the Senate until after Lincoln's election. It was then passed. It increased duties all round. Taken as a whole, however, they were not much higher than those of 1846. The first of the Morrill tariffs was not a War tariff, for war seemed improbable at the time it was passed. But it subsequently became the basis of the War tariffs of the sixties, and of many high Customs duties which were continued for twenty years after the war came to an end.

This tariff of 1861 was primarily for revenue. Ten years later its author admitted that in 1860 there was no popular demand for its protective features.

The Morrill tariff which came into being in this way had scarcely got into the hands of the collectors of Customs at the ports before the War of the Rebellion broke out, and the Federal Government was in need of vast sums of money. There was consequently another revision of the tariff as soon as the new Congress—that elected in 1860—could be got together in extra session in the summer of 1861. In the winter of 1861 duties were again increased. The next year further additions were made, and before the end of 1862 the duties levied on imports averaged 37 per cent.

In 1862 great additions were also made to existing internal taxes. More than twenty new excise duties were imposed. Among these were taxes on numerous manufactured articles. In 1864 the Customs tariff was again revised, and additional taxes were imposed on articles manufactured at home. To compensate the manufacturers for these internal taxes, additional Customs duties were imposed on articles from abroad. It was at this juncture that American manufacturers got into the habit of going to Washington and demanding that high import duties should be levied on the goods of their European competitors. Ever since 1864 they have been going to Washington on similar errands. In the sixties they obtained what they asked for to compensate them for the War duties levied on the articles made in their own workshops and factories. In later years protection has been afforded them in return for contributions made to electioneering funds.

As a result of the revisions made under these circumstances, the American tariff between 1864 and 1870 imposed duties on nearly 1,500 articles at an average rate of 47 per cent. It is now admitted by American historians of fiscal legislation that the War tariff in its final state was largely owing to the endeavours of the protected manufacturers to gain each for himself the greatest possible advantage irrespective of any other interest. Morrill and the Republicans who were responsible for the tariff during these years had Protectionist leanings; but they were not Protectionists of the M'Kinley school, and the Republican party had yet to travel a long way before it declared, as it did at its National Convention in 1888, that if Protectionist tariffs resulted in large surpluses in the National Treasury, it was prepared to abolish all the internal duties on whisky and rum, in order that high Protectionist duties might be maintained in the interest of American manufacturers.

Reductions in taxation were made as soon as the War came to an end. Hardly any of them, however, were in the Customs tariff. People demanded less taxation, and their demand was met, not by revising both internal revenue and Customs duties, but by abolishing the internal War duties. The War came to an end in 1865. In 1867 a beginning was made in the repeal of the internal War taxes. By 1872 the last of these taxes had been abolished, and none but indirect internal taxes remained. These were on tobacco and whisky.

Eleven years elapsed before the War tariff was revised, and during this time the manufacturers were deriving the advantage of the high duties imposed in 1864 to compensate them for internal revenue duties which had now been swept away. Nor were the manufacturers content to let the War tariff remain as it was. Many of them demanded still higher duties. A Bill was introduced for this purpose in 1866. It was carried through the House of Representatives, but failed in the Senate.

In 1867 a bargain took place which is typical of much in the tariff history of the United States. The woollen manufacturers were anxious that there should be a reduction in the duty on the finer grades of wool used in carpet making. Little wool of this kind was then produced in America. But the wool growers objected to any changes likely to be detrimental to their interests, and opposed the demands of the woollen manufacturers. To effect a settlement, a conference was held at Syracuse, when it was agreed that the wool growers were to ask for further duties on wool, except that used in carpets, and that, to compensate for these increased duties on raw materials, the manufacturers were to ask for large additional duties on manufactured woollen goods. The arrangement was highly advantageous to both parties. The terms of it were embodied in a Bill which became law in March, 1867. This was one of the signal victories of the Protectionists in the years immediately following the War.

There was another of these Protectionist successes in 1869, this time in the copper industry. The owners of great copper mines in the neighbourhood of Lake Superior were anxious to crush out of existence copper-smelting firms at Boston and Baltimore which used imported ores. Accordingly they went to Congress, and secured the passage of a Tariff Bill which made it impossible to continue the Boston and Baltimore works. They also procured an additional duty on the manufactured product, with the result that the mine owners who had moved for legislation soon had a monopoly of the copper market of the United States, and it was possible to buy American copper cheaper in England than in New York or Philadelphia.

These were two outstanding Protectionist successes achieved between 1864, when the War tariff was adopted, and 1883, when it was revised. There was a partial revision in 1870. Few manufactured articles were affected by the reductions then made, and on the other hand higher duties were imposed on steel rails, on marble, on nickel, and on some manufactured goods, such as watches and buttons, the makers of which had sought protection.

During the first ten years after the War, Congress was mainly engaged with the reconstruction of the South, that is, with the work of readmitting the revolted States into the Union. All this time, and in fact until 1884, the Republicans were in charge of the Administration at Washington. They had carried the country through the Rebellion, and at each succeeding Presidential election following that of 1860 they were continued in power.

At their second National Convention, that of 1860, at which Lincoln was adopted as their candidate, the Republicans as a party put themselves on record on the tariff. They did not go beyond the Whig demand of 1844. They contented themselves with declaring that, "while providing revenue for the support of the general Government by duties on imports, sound policy requires such an adjustment of these imposts as to encourage the development of the industrial interests of the whole country." They also commended "that policy of national exchange which secures to the working man liberal wages; to agriculture, remunerative prices; to mechanics and manufacturers, an adequate reward for their skill, labour, and enterprise; and to the nation, commercial prosperity and independence." This was part of the programme, or, as it is called in America, the national platform on which Lincoln was elected. But the slavery question in 1860 overshadowed all others. At the third Republican Convention held in 1864, when Lincoln was again nominated for President, there was no mention of Protection. The Rebellion was then at its height, money was needed to meet the expenses of the war, and all that the Republicans demanded in their national platform of 1864 was a vigorous and just system of taxation.

Four years later, in 1868, there was again no mention of Protection, although at this time the tariff had been before Congress. Thus, from 1860 to 1868, the tariff was not discussed in the national platform of the Republican party. At the convention at Philadelphia in 1872 the tariff reappeared in the Republican platform almost in the same words as in the platform of 1860. It was in this year insisted that the revenue of the Government should be raised by internal taxes on tobacco and liquors, and by means of "duties upon importations, the details of which should be so adjusted as to aid in securing remunerative wages for labour, and to promote the industrial prosperity and growth of the whole country." This demand in 1872 went no further than the Whig demand of 1844; and the platform of 1872 makes it clear that, if national platforms express the opinions of American political parties, the Republican party had carried the country through the war without altering its opinion on the tariff question, and that it was still in favour of a tariff for revenue only.

It is now believed that the Republican party first began to accept subsidies from protected manufacturers in 1876. This is the year, as fixed by the *New York Nation*,* in which the partnership between the protected manufacturers and the present high tariff party in the United States began.

The tariff question once more came to the front in 1876. Hitherto the Democrats had made little or no mention of it in their national platforms. In 1876 they denounced the tariff then in existence "as a masterpiece of injustice, inequality, and false pretences;" and the protective system as "one which had promoted fraud, fostered smuggling, enriched dishonest officials, and made honest merchants bankrupts." They rounded off these denunciations with a demand that all Custom House taxation should be only for revenue.

There are Free Traders in the Democratic party. These Free Traders, however, have for many years past been in a minority; and the Democratic party has never gone further than its declaration of 1876 in favour of a tariff for revenue only. Even in that demand it is not now as united as it was in 1876. Since then manufacturing has been developed in three or four of the Southern States, and, as the proceedings on the Wilson tariff made plain, some of the members of the Democratic party in Congress are as much under the influence of the manufacturers as the Republicans.

In 1880 the Republicans had been in possession of the Administration at Washington for twenty years. They laid great stress on this fact in their national platform of that year, recalled their claims to the gratitude of the American people for carrying the country through the war, and reaffirmed the belief avowed in 1876, that "the duties levied for the purpose of revenue should discriminate in favour of American labour."

Between 1880, when Garfield was elected President, and 1884, when the Republicans lost their long hold on the Administration, and the Democrats elected Mr. Cleveland as President, the War tariff was revised by Congress. The revision was rendered necessary by the fact that, in spite of the lavish expenditure on pensions to soldiers of the war, the Federal Government was from 1879 onwards annually confronted with an enormous surplus.

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* The leading weekly journal of politics and literature in the United States.

In 1882 a Commission was appointed to deal with the tariff. Its members were mostly advocates of Protection. The Secretary of the Woollen Manufacturers' Association, one of the parties to the Syracuse bargain of 1866, was the President of the Commission. Notwithstanding the Protectionist opinions of the Commissioners, reductions in the tariff were recommended. The spirit in which the recommendations were made is shown by a statement subsequently published by the President of the Commission in the *Woollen Manufacturers' Bulletin*. "Reduction in itself," wrote this advocate of a Protectionist tariff, "was by no means desirable to us. It was a concession to public sentiment, a bending of the top and branches to the wind of public opinion to save the trunk of the protective system. In a word, the object was Protection through reduction. We were willing to concede, only to save the essentials both of the wool and woollen tariff. We wanted the tariff to be made by our friends." These were the terms in which the President of the Tariff Commission, who for years had been a Protectionist, justified the recommendations made by the Commission to Congress.

By 1882 reconstruction was at an end, and the Republican party had completed the work for which it came into existence in the fifties. It had carried the country through the war, reconstructed and readmitted the revolted States, and granted pensions to nearly every man who was under arms in the Union forces for any considerable time between 1861 and 1865. It was now, and had been for some years, living upon its war record, and keeping itself alive by the process known in America as "waving the bloody shirt." The shrewder advocates of Protection realised all this, and feared that any Presidential election might bring about the downfall of the Republicans at Washington. Hence the report of the Tariff Commission in 1882, and the anxiety of its President that the tariff should be overhauled by the friends of Protection. The War tariff and the surplus it produced had now become a scandal and a danger. Some reform was inevitable.

The Protectionists in the House of Representatives manœuvred, as well as they knew how, to prevent the reform of 1883 from working any mischief to the industries protected by the War tariff, and it was only when spurred on in an irregular way by the Senate that the revision was begun. In the end the reform effected was little more than a sham. There were some reductions on the cheaper grades of cotton goods, and on steel rails, but the duties which were left were still practically prohibitive. After 1883 the surplus continued to recur and to increase, and in 1884 another endeavour was made to remodel the tariff. This was made by Mr. W. Morrison, a Democratic Congressman from Illinois, who by means of reductions made in a wholesale fashion, embodied in what Americans call a horizontal Bill, sought to put the tariff back to where it stood after the Morrill revision of 1861. The Morrison Bill failed.

At the Presidential election in 1884 the tariff was still unsettled, and so far as manufactured goods were concerned the American people were still living under the War tariff enacted twenty years before. The recurring surpluses had compelled some pretended reforms, but the interest of the manufacturers at Washington had been too strong to admit of the reforms being entered upon with any sincerity. To get rid of the difficulty in connection with the national finances it was suggested by the Protectionist Republicans that money should be lavished on internal improvements, on warships and fortifications, on pensions, or even divided among the States according to population. In short, money was to be spent anyhow, provided that the surplus in the Treasury was kept down, and the high tariff of the war continued.

In 1884 the tariff occupied a more important place among the questions canvassed at the Presidential election than at any previous time. The Democrats reiterated their demand of 1876 for a tariff for revenue only in new phraseology, declaring themselves, in their Chicago platform of 1884, as opposed to all propositions "which on any pretext would convert the general Government into a machine for collecting taxes to be distributed among the States or the citizens thereof."

The Republicans, in their national platform of 1884, now gave evidence of the close partnership with the protected manufacturers which, as has been stated, was believed to have existed since 1876. They asserted that "the largest diversity of industry is most productive of general prosperity, and of the comfort and independence of the people." They, therefore, demanded "that the imposition of duties on foreign imports should be made, not for revenue only, but that, in raising the requisite revenue for the Government, such duties should be so levied as to afford security to our diversified industries, and protection to the rights and wages of the labourer, to the end that active and intelligent labour, as well as capital, may have its just reward, and the labouring man his full share of the national prosperity."

Mr. Blaine was the Republican Presidential candidate at the election in 1884. He had been a party to the so-called tariff reform of 1883. He was an out-and-out Protectionist, and in the Presidential canvass, which extended from June to November, he and his friends resurrected "the pauper labourer of Europe," who as has been explained, was first introduced into American politics about 1840. Little had been heard of the pauper labourer for forty years previous to 1884. He was, however, made a stock figure in the Presidential campaign of that year, and the Cobden Club of London became, for the first time, so far as my knowledge goes, another imported bogey in American politics.

Mr. Blaine was defeated in 1884 by the defection of the Republican reformers, who left the ranks of their party and allied themselves with Mr. Cleveland and the Democrats. These Republicans—Mugwumps, as they were then called—were dissatisfied with the action of the Republicans on the tariff, and were even more strongly repelled by the lack of political morality which had characterised Mr. Blaine's public career at Washington. With the defeat of Mr. Blaine, the Republicans lost the hold on power which they had enjoyed without a break since 1861, when Lincoln became President. All the devices they had brought into play from the time General Grant was President, to ensure to them the control of the national Government, failed them in 1884.

During the four years from 1885 to 1889, in which Mr. Cleveland was President, and the Democrats controlled the Administration at Washington, another effort was made to reform the tariff. This took the form of the Mills Bill, named after the Chairman of the Committee of Ways and Means by which the Bill was reported to the House of Representatives.

The Mills Bill of 1888, like the Morrison Bill of 1884, failed. In 1888 the Democrats were in possession of the Administration. They also had a majority in the Lower House of Congress, but in the Senate the Republicans were still in a majority.

As the same fate attended the Mills Bill of 1888 that had attended the Morrison Bill of 1884, tariff reform was again the issue of the Presidential election in November, 1888. Nearly a year before the election activities began, and while Mr. Cleveland was still President he wrote an open letter which, in view of the fact that his nomination for a second term was a foregone conclusion, committed the Democratic party in the Presidential campaign of 1888 to a tariff for revenue only. Both parties accepted the issue, and the election, even more than that of 1884, turned on the tariff. The question was whether the tariff was to be reformed according to the principles the Democrats had enunciated since 1876, or in accordance with the principles put forward by the Republicans in 1884, and endorsed again in 1888.

No attempt was made in 1888 to hide the close alliance which existed between the manufacturers and the Republicans. The manufacturers were openly called upon for immense sums for campaign purposes, and the levying of this tribute from the protected interests was publicly referred to by the Republican political managers as "frying the fat" out of the people who were making great fortunes out of the high protective tariff. A great part of this money was collected by Mr. Wanamaker, the owner of a retail dry goods store in Philadelphia. He gave handsomely to the fund collected through his endeavours from the manufacturers, and in return for his contribution and his work as an organiser of the fund he was made Postmaster-General in President Harrison's Cabinet of 1889–93.

After the M'Kinley Act was passed in 1890, and the election in the same year overthrew the party which was responsible for it, there was much controversy as to what the rank and file of the Republican party desired in the way of tariff reform, when they elected President Harrison in 1888. But whatever the ordinary voter in the Republican party desired, the manufacturers wanted more Protection. They paid for more Protection. The Republican platform adopted at the Chicago Convention went further than it had ever gone in its demand for Protection. Elections were bought with the funds contributed by the manufacturers, and no sooner were the Republicans installed in office at Washington, and the House of Representatives and the Senate controlled by Republican majorities, than the manufacturers demanded the fulfilment of the bargain of 1888, and the M'Kinley Act of 1890 was the result.

The money raised by these bargains was lavishly used in electing President Harrison in 1888. It went into what the Americans describe as the doubtful States. At every Presidential election there are certain States which always give majorities to the Republicans, and others which with as great a certainty give majorities to the Democrats. The Republican States are in the East and West. The Democratic States are thōse of the South.

New York, New Jersey, and Indiana are the most important of the doubtful States, and at each Presidential election both parties use every possible means to ensure success in these States. In the election of 1888, New York and Indiana were the most doubtful States. In New York, however, Republican success was secured, it is now believed, by a deal between the politicians, according to the terms of which the Democrats were to be allowed to elect a Democratic Governor, and the Republicans were to elect Presidential electors who were to vote in the Electoral College for Mr. Harrison.

Indiana in 1888 was the pivotal State, so far as the Republicans and the high tariff advocates were concerned; and into this State went a large part of the enormous campaign fund subscribed by the protected manufacturers. It was used to buy votes, or, to quote the phraseology of Colonel W. Dudley, the Republican manager of the campaign in Indiana, to purchase "floaters" in "blocks of fives." "Floaters" is an Americanism for electors with no political convictions or moral scruples; for those electors who before they vote always want to know "What there is in it for me." The election of 1888 was a carnival time for the "floaters" of Indiana.

The methods by which these voters were secured for the Republican party and taken to poll recalls borough elections in England between 1832 and 1883, before the Corrupt Practices Act, carried through Parliament by Lord James, came into operation, and when "bottling" was a common electioneering method. In England, in those days, the doubtful voters were made drunk overnight, and carried to the polls in a drunken state. The Indiana methods of 1888 were exactly of this kind. They were fully described in the New York *Nation*[*] by Professors Dabney and Woodford, of the Indiana University, at Bloomington, who were eye-witnesses of the scenes which occurred in this part of the State when Indiana was carried for President Harrison and the Protectionists.

"In order to get a view of practical politics with his own eyes," wrote Professor Dabney, "the writer spent the greater part of election day at the polls, and there witnessed the most instructive, if not edifying, spectacle. But it must not be supposed that the wily workers deferred until election day their struggle for the possession of the 'floaters.' All day Monday, on the contrary, the battle raged, and when the shades of night settled down over Bloomington probably more than a hundred of the voting cattle had been corralled in various buildings, with sentries to guard them against surprise by the foe. Among the places that served as pens for these drunken 'floaters' may be mentioned the office of the leading Republican paper of the county, and the hall of the local Grand Army of the Republic post.[†] Wagon loads of 'floaters' had also been transported into the surrounding country, ready to be brought back with a rush to the poll at sunrise. As Harrison carried Indiana, and Munroe county (in which Bloomington is situated) showed heavy Republican gains, it is hardly necessary to state that the majority of these wretched creatures were captured by that Grand Old Party of Great Moral Ideas which possesses the monopoly not only of wool, wheat, and pig iron, but also of virtue."

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[*] November 17th and December 27th, 1888.

[†] The fraternal organisation of the soldiers who fought in the War of the Rebellion.

Some of the details concerning the management of the captured "floaters" recall those of the days of bottling in England. Bottled electors were usually well fed and were supplied with all the drink they wanted. It was the same with the Indiana "floaters." There was such a demand for chicken sandwiches in the corrals in which the "floaters" were secured that, according to Professor Dabney's account, the Bloomington stores were all without butter on election day.

As to the price paid for voters, Professor Dabney states that in 1880 "one crisp two-dollar bill was said to be the price of a Hoosier vote; but in 1888 the average price was probably three glittering five-dollar gold pieces." "The Bloomington butchers," he added, "report that since election negroes have offered many of these yellow coins in payment for meat. It must not be supposed, however, that negroes are the only purchasable voters in these parts. The Hoosier 'floater' is but too frequently neither negro nor foreigner, but your genuine free-born American sovereign." A month later, after Professor Dabney's letter to the *Nation* had been much discussed in the press, every statement it contained was corroborated by Professor Woodford, who, like his colleague of the Indiana University staff, had spent election day at the polls. Professor Woodford recorded a conversation with a Democratic worker who lamented that the Republicans were gaining on the Democrats as the election proceeded. "They have," said the Democrat, alluding to the Republicans, "more money to spend than we have. We try to be economical and get votes as low as we can, but they have three dollars to our one."

With the vote of New York secured by the bargain to which reference has been made, and with the vote of Indiana obtained by methods such as those described by Professors Dabney and Woodford, General Harrison's election was carried in November, 1888, and from 1889 to 1893 the Republicans controlled the Administration, and were in a majority in both Houses of Congress.

The methods adopted in Indiana to secure a Protectionist victory in 1888 were discussed after the election in the press and in Congress. A Congressional inquiry was suggested, but nothing came of the suggestion; and two of the Republican managers principally responsible for the fund raised from the manufacturers burnt their books soon after the election. It was admitted that a large fund for Republican campaign purposes was raised in Philadelphia, and that it came from the manufacturers. How it was spent was explained by the Philadelphia *Press*, a Republican journal, whose editor was sent as American Minister to St. Petersburg by President Harrison.

"The legitimate expenses of a national campaign," wrote the *Press*, "have come to be enormous. There is a great educational work to be done, a vast literature to be created and circulated, an army of speakers to be brought into the field, various organisations to be made and mobilised, machinery to be built for getting out the full vote, safeguards to be provided against fraud, and an immense enginery is needed for persuading and marshalling at every point the last score among six million voters." These are the words in which the leading Republican newspaper of Philadelphia explained the need of the campaign fund which Messrs. Quay and Wanamaker handled from that city in 1888. The machinery described by Professor Dabney as being used in Indiana comes well within the description of the campaign machinery published by the Philadelphia *Press* when public interest in the Philadelphia campaign fund was at its height.

In the United States there are only two classes of people who can be looked to for funds for electioneering. These are the men who are desirous of obtaining office, and those who are personally and pecuniarily interested in legislation, and who desire to turn elections in the direction favourable to their own personal ends. The amount subscribed by candidates for office is comparatively small, for, except as regards the United States Senate, candidates for office are usually comparatively poor men. Most of the money for campaign purposes of recent years has come from people who are interested in legislation.

There is now no lack of testimony to the fact that the Republican party managers sold themselves to the protected manufacturers in 1888. The statement that they did so has been made repeatedly by responsible men, and has never been answered or repudiated by the Republican managers. It was made in no doubtful language by Mr. Carl Schurz, in a letter to a number of citizens of Brooklyn who had asked him to address a campaign meeting in August, 1892. Mr. Schurz was one of the foremost members of the Republican party between 1860 and 1876, and was at one time a member of Lincoln's Cabinet. In his letter of August 10th, 1892, he made the statement that "in its National Convention of 1888 the Republican party sold itself, body and soul, to the money-power interested in the protective tariff, expecting from it substantial aid in the election."*

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* Published in the *New York Evening Post*, September 19th, 1892.

I know that this is a grave assertion (said Mr. Schurz), but if you are not yet satisfied of its truthfulness, you need only study the history of the campaign of 1888 and what followed. There was not the slightest popular demand for higher tariff duties. The Republicans had till then substantially admitted the desirability of reductions, and only asked that they, as the friends of the system, be permitted to make the alterations themselves. But in 1888 the scene changed. With the most cynical frankness, Republican leaders notified the protected manufacturers, openly recognising them as the beneficiaries of the tariff, that unless they permitted the "fat to be fried out of them" for the benefit of the Republican party they need not expect any further tariff favours—in fact, the tariff might be let go by the board—but that they would be well taken care of if they paid up. The Republican National Convention took extreme Protection ground. A vista of indefinite increases of duties was opened. The fat-frying process proceeded vigorously. The beneficiaries of the tariff contributed with profusion. The Republican campaign fund received unprecedented sums of money to be expended by Mr. Matt. Quay.* Thus the victory was won. Then the helpful beneficiaries of productive duties demanded and received their reward, and that reward was the M'Kinley tariff. It is a notorious fact that for not a few of the new tariff rates scarcely any reason could be given, except that they had been asked for; and the demand for them was enforced by the argument that they had been earned.

With this moneyed power, compacted by a common interest (continued Mr. Schurz), the Republican party has a sort of tacit partnership agreement—and not quite tacit either—to this effect: The party of the first part, the moneyed power, is to do all it can by way of furnishing campaign funds to be used in national elections, to keep the party of the second part, the Republican party, in possession of the Government. The party of the second part, the Republican party, is in return to do all it can by way of tariff legislation to keep the party of the first part, the moneyed power, in the enjoyment of large financial profits. And the larger these profits are, the more able and the more willing will be the party of the first part, the moneyed power, to furnish the party of the second part, the Republican party, with a big corruption fund for buying the next election, expecting, of course, for itself again ample returns in the shape of still more profitably devised tariff laws. And so on.

Can you (asked Mr. Schurz, in considering the seriousness of the inroad on political morality involved in bargains of this kind) find among all methods of using money in elections one that is farther-reaching and threatening in the long run more pernicious results than the systematic investment of money by a great financial power in a political party, to obtain through that party legislation securing large pecuniary profits to the investor? Can you imagine a more effective machinery for the use of money in elections, and all that it implies, than a great political party lavishly subsidised by rich men and corporations who seek through it the enactment or continuance of laws to make them still richer? I say to you, the most fertile genius of evil in his most ambitious flights of fancy cannot invent a surer method fatally to demoralise the political life of a people governing themselves by universal suffrage than a policy putting up a stake of untold millions of money in its general elections, that stake of untold millions to be won by a strong financial power through the victory of one of the political parties of the land The result is inevitable.

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* I said to such as I addressed, "How much would you pay for insurance upon your business? If you were confronted with from one year to three years of general depression by a change in our revenue and protective methods affecting our manufactures, wages, and good times, what would you pay to be insured for a better year?" That they understood to be the measure of their contribution. We raised the money so quickly that the Democrats never knew anything about it. They were not beaten in November nor October, but long before that.—*Interview with Mr. John Wanamaker in the "New York Sun," April 10th, 1892.*

In the revolt from the Republican party in 1884 Mr. Schurz was one of the leaders. He was a mugwump. It may be objected that his statement of the bargains of 1888 is tinctured by the zeal of a convert. However that may be, his emphatic statement that there was no popular demand for Protection, that the party managers outran the party in their eagerness for more Protection, is corroborated by the St. Louis *Globe Democrat*, the leading Republican journal of the South-West. In 1890 the Republicans who carried the M'Kinley tariff were defeated at the Congressional elections, and in 1892 President Harrison was defeated by Mr. Cleveland in the Presidential election.

In 1892, after the second Republican reverse, independent Republican journals, such as the Chicago *Tribune* and the *Globe Democrat*, ridiculed the idea of the thick-and-thin supporters of M'Kinleyism, "that the people did not understand M'Kinleyism and its benefits," and recalled the fact that what the people desired in 1888 was not more Protection, but tariff reform and reductions in the tariff. "The verdict against M'Kinleyism," the *Globe Democrat* insisted after the elections of 1892, "has been rendered twice, and after an interval of two years between the judgments. The first verdict may have been hastily given and without sufficient examination of the evidence. The second was recorded after a reasonable deliberation, and it was more pronounced and emphatic than the first. If the Republican party is to win any victories in the future, it must drop M'Kinleyism immediately and permanently, and send all men who cling to it to the rear. It was emphatically and fatally wrong on the tariff. The passage of the M'Kinley law of 1890 was the greatest blunder ever committed by any party since the Democratic crime of secession."

The M'Kinley Act, the outcome of the bargains of 1888, was carried through Congress in the autumn of 1890. It effected some reductions in the tariff in order to keep down the surplus. The duty on sugars was reduced. On those above sixteen Dutch standard the reduction was from three and a half cents per pound to half a cent per pound. It also decreased to a small extent the duties on iron and steel. On the other hand, it greatly increased the duties on the other highly protected industries, on most of those which had enjoyed protection under all the tariffs since 1861. This was especially so with regard to wool, woollen goods, cottons, glass, and cutlery. A heavy duty was also laid on tin plates.

To conciliate the farmers, and to make them believe that all industries came within the fostering care of M'Kinleyism, the then existing duties on agricultural products were increased and new ones imposed. These changes were made for political effect, and were of no advantage, except to a few farmers living on the Northern frontier, in the neighbourhood of markets formerly open or half open to farmers in Canada. It was proposed to impose a duty on hides to conciliate the cattle men of the far Western States, and place them in a position similar to that of the wool growers in regard to competition from abroad. The shoe manufacturing interests of New England, however, were too strong for this movement, and the attempt to protect the cattle trade by means of a duty on hides came to nothing.

How the higher prices and the threats of higher prices affected the country may be judged from a statement which Mr. Thomas Reed, the Speaker of the House of Representatives, made in explaining the defeat of the Republicans, which occurred in December, 1890. The Speaker at Washington holds a different position from the Speaker at Westminster. He is the leader of his party in the House, and he uses all his influence and all his opportunities to help forward the measures of the party which has elected him to the Chair. Mr. Reed was Speaker in 1889 and 1890, and in 1889 he created new Parliamentary methods and turned them to account in forcing the M'Kinley Bill through the House of Representatives. After the defeat of November, 1890, he attributed it all to the commercial travellers and the women.

> In hundreds of cases (Mr. Reed told the Portland, Maine, correspondent of the *New York Sun*) the drummers were intentionally or unintentionally missionaries to preach the Democratic doctrine. They went all over the country with their stories of advances in price that were to be made next week or next month on account of the M'Kinley Bill. But I am inclined to think that the most important factor in the result of this election was the women of the country. It is the women who do the shopping, who keep the run of prices, who have the keenest sense for increased cost. They heard in every store how this article or that could not be sold hereafter because of the M'Kinley Bill. They went home and told their husbands and fathers, and their stories had a tremendous effect at the ballot box.

The popular revulsion against M'Kinleyism defeated the Republicans at the Congressional elections in 1890, and it defeated them again at the Presidential election in 1892, when Mr. Cleveland was elected. He was elected on the platform of tariff reform, and entered upon his Presidential term of four years in March, 1893. The biennial elections of Congressmen, which took place in the Presidential year, gave the Democrats a majority in the House of Representatives, and in this Congress they had, for the first time since 1881, a majority in the Senate. For two years they controlled both Houses, and for the first time since the election of Lincoln in 1860 the Democrats were in possession of the Executive as well as of both Houses of Congress.

In the session of 1894 the Democrats entered upon the work of reforming the tariff. The committees of the House of Representatives are named by the Speaker, and are always so chosen as to give the party in the majority in the House a majority on each committee. In the Congress which lasted from 1893 to 1895 Mr. W. L. Wilson, a Democrat from West Virginia, succeeded Mr. M'Kinley as Chairman of the Committee of Ways and Means, and it was with this committee, in the winter of 1893, that the measure now known as the Wilson Tariff Act originated. The Wilson Act is the last in the long list of tariff measures enacted by Congress since 1789, when duties were first imposed on imports. How long it will remain the last is difficult to say, in view of the fact that at the time of writing * the Presidential campaign is in progress, and, notwithstanding the disaster brought upon the Republican party in 1890 and 1892 by the M'Kinley tariff, Mr. M'Kinley, of Ohio, is the favourite candidate with the Republican politicians, as distinct from the Republican electors, and has a majority of the delegates to the National Convention pledged to his nomination. This article will be in print before the result of the election can be known. Mr. M'Kinley may not be elected; but if he is elected, the mode in which the election will be brought about in the light of all that happened in 1888 and 1890 warrants the conclusion that there will be another early revision of the tariff, carried out with the same aim and in the same spirit as that of 1890.

The Wilson Bill of 1894, as it left the Committee on Ways and Means of the House of Representatives, was by no means a Free Trade measure. It was not even a tariff for revenue only, and, cautious as it was in dealing with the protected interests, it was remodelled out of all recognition in the Senate. All the revisions then made were in a Protectionist spirit, and special interests were contended for alike by Democratic and Republican Senators with as much zest as when the M'Kinley Bill was going through Congress. One Democratic Senator held out for a high tariff on cuffs and collars, because some of his constituents were in the collar business; and other Democratic Senators, similarly wholly ignoring the declarations of their party on the tariff on which the President and the Democratic majority in Congress were elected in 1892, held out with great pertinacity for special treatment for the sugar, coal, iron, and wire interests. The unseemly wrangle went on for a couple of months in the summer of 1894, and Washington was as full of rumours of dickers and trades as it was when the M'Kinley Act was under discussion in the autumn of 1890.

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* May 20th, 1896.

Many of these rumours were as to the use of money by the Sugar Trust. The trust was opposed to free sugar. Like all the other American trusts and combinations which have been built up behind the protective tariff, it wanted a duty on the article in which it was interested. The Bill, as sent to the Senate from the House of Representatives, placed sugar on the free list. This was continuing and extending the surplus-reducing policy which was embodied in two or three of the schedules of the M'Kinley Act of 1890. Under that measure sugars not above sixteen Dutch standard were put upon the free list, and the duty on those above sixteen was reduced from three-and-a-half cents a pound, at which it had stood since 1883, to half a cent per pound.

The Wilson Bill, as it left the House of Representatives, abolished the sugar duty. The Senators, however, stood out for a duty, and for many other high protective amendments. Conferences between committees of the two Houses went on for a month. Ultimately, the House of Representatives had to give way, and to concur in the numerous amendments made by the Senate. The tariff reformers in the Lower House persisted to the last in their endeavours to get sugar, coal, iron, and wire on the free list. They introduced what are known in the political slang of Washington as Pop-gun Bills. These are short one-item Bills, intended, when introduced in connection with the tariff, to make changes in the schedules in regard to particular items. Bills of this description, dealing respectively with sugar, coal, iron, and barbed wire, were passed in the House and sent to the Senate. They were designed to put these articles on the free list, but they did not get beyond the Finance Committee of the Senate, and in the next Congress—that elected in 1894—the Democrats were no longer in a majority, and there was an end for the time of tariff reform on the lines to which President Cleveland committed his party by his famous letter of 1887.

A larger measure of success attended the efforts of the Democrats in the House of Representatives to reform the tariff of 1894 than attended the Morrison Bill of 1884 and the Mills Bill of 1888, both of which originated in Committees of Ways and Means in Houses of Representatives in which the Democrats were in a majority. But in those years the Democrats were in a minority in the Senate, and could not hope for success. When, after years of waiting, they were in a majority in both Houses, the Democrats in the Senate were so divided and so susceptible to the influences of the protected monopolists that the ultimate measure of success was wofully small.

On the part of tariff reformers in the Democratic party who were really sincere there was no attempt to conceal the disappointment felt over the measure of 1894. President Cleveland refused to sign the Bill; and, as a protest against the corrupt methods by which it was distorted in the Senate, he allowed it to become law without his signature. A letter written by him* in explanation of this unusual course was practically a corroboration of the serious statements which had been made in Washington concerning the interference of the Sugar Trust with the proceedings of Congress. He attributed the concessions to the trust to the power it had exercised over several of the Democratic Senators; to what he described as the "communism of pelf," whose machinations had prevented the Democratic party from reaching the success at which it aimed. He also declared that when the American people had recovered from their astonishment at the recent exhibition of power on the part of the trusts, it would be for them to say whether the trusts should submit to the free legislative will of the people's representatives, or should dictate the laws which the people must obey. The letter was an exhibition of the pitiable helplessness of the people of the United States when confronted in Congress with organisations of the resources and magnitude of the Sugar Trust. As a document emanating from the Executive of a country possessing representative institutions, President Cleveland's letter has surely no parallel in the annals of legislation.

An ineffectual effort was made in 1894 to investigate the statements as to corruption by the Sugar Trust. Like other investigations at Washington, it had no practical results. There was a committee of inquiry and a wearisome conflict between the committee and recalcitrant witnesses. Congress has no Clock Tower Chamber for witnesses who set its committees of inquiry at defiance, and seems to possess no power to "send for persons and papers," far-reaching and effective, like that enjoyed and sometimes exercised by Parliament. One fact came out quite clearly: this was that the responsible head of the Sugar Trust had contributed to the State campaign funds of both the Republican and the Democratic party.

This is not a new practice with American financiers, railway magnates, and organisers of trusts. The late Mr. Jay Gould once publicly boasted that he was a Republican in one New York county and a Democrat in the next, but was always an Erie man. Gould had need of political aid at Albany, the capital of New York State, in his nefarious schemes of railway management, and the statement he made meant that the only interests he had in State politics were the interests of the Erie Railway Company.

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* President Cleveland's letter to Mr. Catchings, dated Executive Mansion, Washington, August 27th, 1894.

American trusts, like the late Mr. Gould, have no politics other than, as Mr. Havermeyer, of the Sugar Trust, frankly stated during the investigation at Washington, the "politics of business." During the last twenty years the "politics of business," from the Havermeyer point of view, have had much to do with tariff changes at Washington. In 1894, when the Wilson Act was in Congress, the "politics of business" was a sufficiently strong factor to bring about the enactment of a duty of about one cent* a pound on sugar, solely and absolutely in the interest of the Sugar Trust, which controls the product of sugar in the United States, and which in the year before the Wilson tariff was enacted paid 22 per cent, or $16,500,000, in dividends on a capital of $75,000,000, a capital about five times what it would cost to replace the plant of the undertaking.

Trusts and great combinations, as they are now known in the United States, have come into existence since 1880, about which time the great industries of the country began to be concentrated in a few hands. But before 1880 there were great monopolies which owed their existence to the tariff laws. The copper industry was one of these. The salt industry was another. Under the Tariff Act of 1883 salt in bulk paid a duty of 8 cents per hundred pounds, and salt in bags a duty of 12 cents per hundred pounds. In the Mills Bill of 1888 an effort was made to get rid of this duty, which presses on every household, and is a heavy tax on farmers. The Mills Bill, it will be remembered, was a Democratic measure, originating in a Democratic House of Representatives. In the Senate, however, Senator Hale, a Republican, supported the abolition of the salt duty. "I believe," he said, "that this article should go upon the free list. The monopoly which has obtained heretofore for the Onandago Salt Works is as great and as complete as any monopoly ever granted by the Tudors in England's most despotic time, and it ought to cease." The monopoly did not come to an end in 1888, because the Mills Bill failed. The duty was continued by the M'Kinley Act of 1890, and it was not until 1894, when the Wilson Act was passed, that the people of the United States were entirely free from the war time tax on salt.

It would be a long story to deal with American trusts. It cannot be entered upon in detail in the concluding pages of this article, nor is it necessary that it should be. The Sugar Trust and the tariff of 1894 illustrate trusts as well as though I went over the entire list, and show how nearly all of them are kept in existence and allowed to plunder the country at will by means of tariffs which the trusts themselves dictate. The stories of the Copper Syndicate and the salt monopoly, which have been briefly told, afford corroborative testimony as to their working. What was true of the Copper Trust is true to-day of the trusts in the iron and steel trade, which are held together by the existing tariff. Armour plate for ships from Pittsburg and Bethlehem is delivered in Russian Government dockyards at an enormously cheaper rate than it is sold to the United States Government for use on ships which are in building at Philadelphia. American pig iron is sold in Manchester* at rates which meet the competition of the furnaces of the North of England, although in the United States pig iron is protected by a duty of $4 a ton. One firm controls the manufacture of saws in the United States. Its works are at Tacony, a suburb of Philadelphia. For years it has been notorious that this firm sells its saws in South American cities at prices much below those quoted to hardware dealers in Philadelphia. The duty on saws is 8 cents per linear foot. It is the same with tacks and nails. These are sold at much lower rates if the combination managers are guaranteed that they are for export; while for the home trade the tacks are sold at prices only 10 per cent less than the imported tacks would cost after paying the tariff duty of 25 per cent and freight charges.

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* Forty per cent *ad valorem*, and a duty of one-eighth of a cent per pound additional.

How the Wire Nail Association is managed was thus explained in the *Chicago Times Herald* of May 4th, 1896.

> It is done (wrote a correspondent of the *Times Herald*) through a man in a modest office in Boston, who is known to every nail manufacturer or jobber in the country as Commissioner or Treasurer of the pool. His power is despotic and his income princely. His business is to hold the pool of nail manufacturers and its prices intact. He had previous experience in this line. The trade knows that he succeeded in "boosting" the price of tacks 150 per cent a few years ago, at a time when the trade was in an utterly demoralised condition, and the cost of manufacture lower than it has ever been before or since. He receives a commission of one cent a keg on all the nails sold as long as he succeeds in maintaining rates. This amounts to $6,750 a month, or $81,000 a year, on the basis of allotment agreed on for April. How well the Commissioner keeps up the prices is illustrated by figures taken from the Chicago market. Less than a year ago sixpenny nails sold in Chicago as low as 95 cents a keg. Their price now is $3·30. Lathers' nails, technically known as threepenny fine, sold then at $2·55, now at $4·40. These sorts represent extremes of commercial sizes. The method of keeping the wholesale dealer in line is simple but effective. There are only three or four mills outside the combination, and these are not sufficient to supply Chicago alone. The Treasurer, therefore, notifies the jobber that he is entitled to ten cents a

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* "A trade paper states that pig iron made in Alabama, U.S., is being offered at prices which are decidedly lower than the best quotations of North of England or Scotland makers. During the week a parcel of American pig iron has been purchased by a leading firm for delivery at Manchester, and there is reason to believe that other sales will follow."—*Manchester City News*, March 28th, 1896.

keg rebate, provided he buys of certain mills which the Treasurer shall designate, and does not sell below the stipulated price. As the payment of the rebate is deferred six months, the buyer is in the iron grasp of the Commissioner. The purchases of the buyer during the six months are necessarily so large that he has at all times several thousand dollars in rebates on deposit with the combine. All this is lost if the dealer buys of a mill outside the Association.

There is a duty of 25 per cent on these nails, although, as admitted in an interview published by the *New York Tribune*, the leading Protectionist journal in the United States, in its issue of April 23rd, 1896, there is no competition from foreigners owing to the premier position of the American nail.

> The American wire nail (reads the paragraph in the *Tribune*) is supreme in this country, and there is no competition from foreigners. Although the wire nail is a native of Germany, it has attained a finish in the United States which makes it more popular than the foreign article with Americans. The German wire nail is heavier gauge, or thicker, than ours. Several attempts have been made to introduce it here, but without success, although the foreign nails ruled in this market in the days before Americans started to make wire nails. The last attempt to import foreign goods was by a Boston jobber, who brought 3,500 kegs into port, and finally disposed of them for a song.

The Wire Nail Association, it was further explained in the interview in the *Tribune*, was formed as a protection against the disastrous cutting of prices, and this glorification of the American nail was published in connection with the announcement of an advance of 15 cents per keg issued by the Association.

At the National Conventions of the Republican party since 1884 trusts and combinations have been vigorously denounced. Occasionally, also, efforts are made to break them up in the law courts. These attempts are usually at the instance of the Attorney-Generals of States in which the trusts are at work. But there is never any heartiness or sincerity in these appeals to the courts. No one looks for any satisfactory result. The proceedings are continued for a while and then quietly dropped.- It is impossible, in fact, to break up the trusts by legal proceedings. Many of them have no organisation which can be reached, and those of them which have charters from the States Legislatures would be only slightly and temporarily inconvenienced if the courts should decree the forfeiture of their charters.

There is only one way of reaching most of these organisations—that is by abolishing the protective duties behind which they are buttressed. As long as the high tariff is continued trusts will flourish and people will be at their mercy. Trusts put an end to all real competition in trade. They crowd out the concerns which seek an independent existence, and corrupt political life in the manner so graphically described by Mr. Carl Schurz in his letter to the Democrats of Brooklyn, and by President Cleveland in his letter of August, 1894, concerning the Wilson Tariff Act.

AMERICAN TARIFFS.

Last summer, when I was in Lancashire during the General Election, I was much impressed with the way in which Protectionist sentiment was given expression to in some of the Parliamentary constituencies. In Manchester and in Warrington wire drawers were asking candidates for pledges which, if fulfilled, meant Protection. In the Leigh Division great stress was laid on an unfounded statement that Mr. C. P. Scott's daily journal was printed on imported paper; while in the Darwen Division, judging from numerous placards, it seemed as though the election was turning on French and German chairs.

In view of these manifestations of a desire for Protection, I felt it would be well if people in England could realise that there is a side to Protection which they have not seen, and when it was suggested that I should write a paper for the "Co-operative Annual" of 1897 I gladly availed myself of the opportunity of putting on record some of the numerous notes I have made of the working of the protective system in the United States, as I have studied it and observed it sometimes at close range during the last twelve years.

The World's Fibre Supply,

With special reference to new sources for Textiles, Cordage, Brushmaking, &c.

BY JOHN R. JACKSON, A.L.S., &c.,
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(Illustrated by John Allen.)

AT first sight it might appear to a casual reader that the supply of fibrous substances, even in its widest sense, namely, that of affecting the whole world, was one of no great or considerable magnitude, but if a few moments' consideration be given to the subject it will be seen at once how important is the question, not only as affecting the commerce of this country, but also in the founding of new and important cultures in our own Colonies and the establishing of valuable articles of export.

Official returns show that the average annual imports into the United Kingdom of fibrous substances represent a money value of nearly forty-five million pounds, and this exclusive of esparto and similar substances used for paper-making, which brings it up another five millions. This, it will be admitted, is a large sum for one class of goods, and the fact remains that there is a steady demand for all these substances and a keen interest in anything that shows novelty, improvement, or development. It may perhaps be thought that the age of novelty or of discovery of any new product has passed, but this is far from being the case, as the results of almost any recently organised expedition to any new country have shown, and within the last year or two a further proof of this has been made in the discovery at Lagos of a new and important source of rubber or caoutchouc; so that we may reasonably expect new raw products to be brought to light in the varied branches of the nation's commerce. With regard to improvement or development of existing sources of fibres there is no doubt much still to be done in an age like the present, when chemistry is making such rapid advances, especially in connection with vegetable products, for it is to the vegetable kingdom almost exclusively that we look for developments in this direction, and in this we have the authority of antiquity, for the use of cotton dates back to prehistoric times, as the remains of the Peruvian tombs, where cotton fabrics have been found, abundantly prove, while similar remains of linen fabrics come to us from the Egyptian tombs, and it is not a little remarkable that these two fibres, which were *the* textile fibres of those remote periods, stand in the same position at the present day, for notwithstanding all that has been done, especially in recent years, in introducing new vegetable fibres from different parts of the world, not one can be pointed out as equalling cotton or flax for textile purposes or even as suitable for use as a good substitute, though there are several that enter into commerce and are used for mixing with the older and better known fibres. Of the new fibres that this latter half of the century has introduced to commerce the bulk are absorbed in rope, cord, and brush making, and for these purposes the demand is ever increasing. It is remarkable that for brush-making the application of vegetable fibres dates back only some forty-six years, when bass or piassava was first used for road sweeping, and the brooms thus used were popularly said to be made of whalebone, the brown colour of the bass, together with its stiffness and elasticity, strengthening the belief in its animal origin. The improvement in the system of street cleaning in all large towns, which was rapidly adopted by the various municipal authorities about that time, increased the demand for bass, and since then the adaptation of the horse broom in addition to those used by hand has been the cause of a still further increase in the demand for these stiff vegetable fibres. We shall, however, have to consider these uses more in detail when we come to treat of brush fibres in particular; but before proceeding to deal with the fibres and the plants producing them individually it may be well to say a few words on the distribution of fibres generally throughout the vegetable kingdom. By far the largest proportion of vegetable fibres are obtained from one great group of plants known as *Dicotyledons*, which, besides having well-marked botanical characters to distinguish them from the other group or *Monocotyledons*, such as the distinction in the forms and structure of the flowers, the veining of the leaves, &c., the fibres are for the most part found in the inner barks, and are thus called bast fibres, while in the *Monocotyledonous* group they are formed in bundles and are distributed through the fleshy or cellular portions of leaves and stems. Amongst commercial fibres, however, there are exceptions in each class of plants; cotton itself, for instance, though the product of a *Dicotyledonous* genus of plants is not a bast fibre, but consists of the long hair-like cells which clothe the seeds, and is contained, as everyone knows, in the fruit. There are several similar instances in plants closely allied to the cotton, as, for instance, those that are known as silk cottons, where the hairs are extremely silky in appearance but have no strength. Thus cotton stands alone in being not only the most important vegetable fibre known, but the only example of a really valuable seed fibre, all other fibres of this nature being so short in staple and so brittle that it is impossible to utilise them either for spinning or for cordage. The peculiarity of these special fibres will be more fully referred to later on.

In the *Dicotyledonous* group of plants the most important natural orders or families furnishing useful fibres are the following—*Malvaceæ*, *Sterculiaceæ*, *Tiliaceæ*, *Leguminosæ*, *Asclepiadaceæ*, and *Urticaceæ;* while in the *Monocotyledonous* group are the *Scitamineæ*, *Bromeliaceæ*, *Hæmodoraceæ*, *Amaryllidaceæ*, *Liliaceæ*, *Palmaceæ*, and *Gramineæ*. The commercial value of a fibre depends to a great extent upon its strength, elasticity, and firmness; length is also an important point, as is the colour of the fibre after cleaning. A fibre that will bleach well without the aid of chemicals or an excessive use of chemicals, which often reduces its strength, or one that will readily take dyes, and, moreover, possess the qualities above mentioned, is sure to secure a demand. It is not within the scope of this article to consider in detail the microscopical and chemical aspects of the various fibres. Those who are interested in this purely scientific view of the subject we would refer to a very useful book by Marcel Vétillart, entitled "Etudes sur les Fibres Végétales Textiles," and published by Firmin-Didot et Cie, Paris, in 1876, and also to a "Report on Indian Fibres and Fibrous Substances exhibited at the Colonial and Indian Exhibition, 1886," by Messrs. Cross, Bevan, and King, and published by E. and F. N. Spon.

That the careful examination of vegetable fibrous substances is of great importance, both scientifically and commercially, must be apparent to all, and Messrs. Cross and Bevan, in the preface to the work referred to above, make the following remark with regard to the scientific results accruing from such an examination: "When the vegetable fibres come to be recognised as constituting a special field for research, and worthy the attention of those who have command of the necessary resources, we venture to predict a considerable gain to science in the results of the systematic and sustained investigations which would follow." Again, referring to the scientific and practical sides of the question, they say nothing struck them so much on this last side as the "smallness of the number of the many available fibres which were actually employed in European manufactures. This restricted application of raw materials virtually unlimited in number and variety introduces a very important issue, a further direction of inquiry into its causes: whether they lie in the properties of the fibres themselves, or rather in the incidents of distribution and commerce; and whether, therefore, we are to endorse the present exclusion of the greater number of available fibres, or can show cause for their more extended application."

Though these words were written nearly ten years ago, they are to a great extent as true to-day as when they first appeared. The number of new fibres brought into actual use during the ten years has been wonderfully small, notwithstanding that the subject has continued to attract a considerable amount of attention, both by the growers of fibrous plants as well as by fibre brokers.

It is with the view of bringing the subject more prominently under the notice of others than those actually engaged in the trade that we have taken it up for consideration in this place, in the hope that it may lead to the more perfect development of some, at least, of those substances that have merit but are yet only partially known.

In a subject so vast it is impossible to place under review in the limits of a single paper all those that would appear to have qualities to recommend them; therefore, the following enumeration is a selection only of those that seem to have the most favourable prospects, and these have been further selected as indicating the kind of material that those persons who have opportunities either by travel or residence in different parts of the world should look out for. We have arranged them according to their botanical sequence, as being probably the most convenient to all persons interested, whether scientific or commercial. To the first the natural affinities of a plant yielding a certain fibre would indicate its suitability for any given use, while to the second the fibres of any particular natural family have so many properties in common that for trade purposes they are easily classified.

DICOTYLEDONOUS OR EXOGENOUS FIBRES.

Cochlospermum Gossypium, the Kumbi or Galgal of Hindostan. This is a small tree common on the lower hills of India, from Garwhal, Behar, Orissa, and westward to the Deccan, and belongs to the natural order *Bixineæ*. The fruit is somewhat oval in shape, from two to three inches long and one-and-half inches broad, and when ripe opens naturally by three or five longitudinal slits, exposing the silk cotton which surrounds the seeds, and which is packed tightly and in large quantity. (Fig. 1.) It is extremely soft and delicate, but the fibres are very short. It is sometimes used for stuffing cushions and mattresses, for which purpose it is said to be useful, as it does not readily mat or cake together; but its suitability for any other purpose has never been practically tested in Europe, notwithstanding that it is said the substance could be supplied in large quantities, and at a very cheap rate. It has been suggested as a useful material for gun cotton.

Sida rhombifolia, Sahadebi of Hindostan. A very variable herbaceous plant, belonging to the *Malvaceæ* or Mallow family, abundant in many parts of India, and particularly so in Bengal, but nowhere under cultivation. It is widely spread over the tropical parts of the world. Referring to this fibre, Dr. Watt, the editor of the "Dictionary of Economic Products of India," in a paper read by him before the Society of Arts in 1887, says:—

> A beautiful silvery-white fibre, botanically *Sida*, may be said to be allied to jute, and the fibre it affords in many respects resembles jute. It may be grown on the same fields and by the same cultivators. It can, therefore, be produced at about the same price, for the fibre may be separated from the stems by the same simple process, namely, by retting and washing in water. The only factor that might conduce to make it more expensive than jute is the fact that in its wild state it does not attain the same length of stem as the cultivated jute; but *Sida* has not been cultivated as yet, and there is no knowing but that it may even exceed jute in its yield of fibre per acre. It may be accepted, however, that *Sida* fibre is, like jute, a cheap fibre, and one that might be produced in immense quantities with great ease, the supply being as constant as that of jute. Its claims for superiority over jute are very considerable. The fibre in not half so coarse as jute, and it is of a much purer quality, and can, therefore, be spun into finer yarns than jute, and thus come into textile purposes, which jute has totally failed to reach. It can take colour with great ease; in fact, *Sida* fibre has been much admired by all the manufacturers that have examined it. It is now being experimented with on both flax and jute machinery, and I am hopeful that, as one of the tangible outcomes of the Colonial and Indian Exhibition, this fibre will in a very few years come to hold a distinct place amongst the fibres exported fron India.

Dr. Watt's prophecy, made so long ago as 1887, has, however, not yet been fulfilled. One of the forms of this same species of *Sida* which has been generally known as *S. retusa* has attracted much attention as a product of Queensland, and even at the International Exhibition of 1862 some splendid samples of the cleaned and prepared fibre were shown, and its future as an article of import to this country was said to be ensured. (Fig. 2.)

Malachra capitata, Ran or Banbhendi of India. A malvaceous erect annual, with yellow or white flowers. A native apparently of West tropical Africa and tropical America. The plant is abundant at the present time throughout the hotter damp tracts of India, and particularly in the neighbourhood of Bombay. The fibre can be obtained from 8ft. to 9ft. long, and when properly prepared is almost as soft as silk. At one time it was confidently hoped that Bombay would in this fibre possess the means of competing with the Bengal jute manufacturers. The opinions expressed in India with regard to the quality of this fibre have all been unanimous that it is little, if at all, inferior to jute, "and that capital directed towards the cultivation and manufacture of the fibre is all that is needed to place the industry on a sound commercial basis." It requires a similar prepartion to that of jute.

The stems must be steeped in water immediately after cutting, for if they are exposed to the sun and partly dried great difficulty is experienced in getting rid of the outer bark, and the fibre obtained is coarse and of inferior quality. The plants attain a height of 7ft. to 8ft. in three months, forming a perfectly straight stem, and measuring at the base from $\frac{1}{4}$in. to $\frac{3}{4}$in. in diameter.

Abutilon indicum, the Kanghi of Hindostan. A small malvaceous shrub distributed throughout tropical India, and found also in Ceylon and tropical countries generally. The stem contains a strong fibre suitable for rope-making, and sometimes used for that purpose in India. (Fig. 3.)

An allied species, *A. Avicennæ*, known as the Indian Mallow or American Jute, is also a shrubby plant of North-Western India, Sind, and Kashmir, and is found widely distributed in Northern Asia and in the middle States of America, where it has become a troublesome weed. Considerable attention has been given to the fibre of late years, especially in the United States, where it is said to be superior to Indian jute. The seed is recommended to be sown broadcast, the yield from good soil being four to seven tons per acre of dry stalks. In China the plant is also extensively cultivated, and appears in the export returns of the Imperial Maritime Customs as jute.

Urena lobata, Ban-Ochra. This plant also belongs to the natural order *Malvaceæ*, and is a very variable shrub, found widely distributed all over India, especially in the hotter regions, and also in the tropics of both hemispheres. The bark abounds in a strong useful fibre, which in India the natives consider suitable for sacking and twine, and a good substitute for flax. It is said to be very easily extracted. In West Africa the fibre is known by the name of Toja, and was valued in London in 1889 at from £17 to £18 per ton. (Fig. 4.)

U. sinuata, the Kunjia of Bengal. A small bush growing in the hotter parts of India, producing from its inner bark a strong and tolerably fine fibre, which, like the preceding, might be used as a substitute for flax. The plant is said to attain its full size in wet land or by the margins of streams, and it might probably be cultivated in the same way as jute.

Hibiscus Cannabinus, Deccan Hemp or Ambari Hemp. A small herbaceous shrub of the *Malvaceæ*, largely cultivated for its fibre throughout India, more especially in Chutia Nagpur, the Central Provinces, Madras, and Bombay. The fibre is chiefly employed in India for making ropes, string, and sacking. Were, however, a demand to be created for it the cultivation of the plant might be indefinitely extended, and with profit to many needy cultivators who are unable to produce either jute or cotton. Dr. Watt says:—

> So long as there exists the risk of a supply of the fibre being rejected through a purchaser thinking he was ordering Sunn hemp and having this fibre thrust upon him a healthy trade in the fibre as an article of export is never likely to be developed. It is, therefore, of the first importance that Ambari fibre should have its properties independently investigated, and that a place be established for it separate and distinct from all the other fibres with which it has been confused in modern commerce, or for which it has been employed only as an adulterant.

The fibre when properly prepared is white, soft, and silky, and has been strongly recommended for all such textile purposes where jute can be used. As an illustration of the yield of fibre, five hundred stems about 8ft. high taken at random, and the fibre removed and cleaned in the usual way, gave as a result 5½lbs. of clean and good fibre. Under the name of Kanaff the fibre came prominently to the notice of the authorities at Kew in 1891, and an account was published in the "Kew Bulletin" for August of that year. This referred to its discovery on the shores of the Caspian, where it was said to be much used by the natives. (Fig. 6.)

Hibiscus Sabdariffa, the Red Sorrel or Rozelle of the West Indies, a small, elegant shrub, widely cultivated throughout the hotter parts of India, Ceylon, and in the tropics generally. Two distinct varieties are known, one having red stems and a red fleshy edible calyx, and the other with green stems and a green calyx. The plant is largely cultivated for the sake of the fleshy calyces, which make excellent jelly. The fibre from the stems is of a good quality, strong and silky. To prepare the fibre in Madras the stems are soaked in water for fifteen to twenty days, after which the bark is separated by hand and well washed to free it from any impurities; it is then dried, and is ready for use by the natives for cordage, ropes, and for general agricultural purposes. It is undoubtedly worthy of much more attention than it has yet received. A sample of the fibre in the Kew Museum, prepared from plants grown in the Mauritius, gives a length of eight feet. Another sample, prepared in British Guiana, was valued in London in 1892 at £15 per ton. (Fig. 5.)

Other species of *Hibiscus* of more or less value as fibre plants are—1. *Hibiscus Abelmoschus*, known as the Musk Mallow, on account of the seeds possessing a strong musky odour, on which account they are used in perfumery as a substitute for animal musk. The plant is of a bushy habit, common throughout the hotter parts of India, and now found in most tropical countries. With some experiments with this fibre, made some time back with a machine by Messrs. Death and Ellwood, the yield of good fibre was shown to amount to 800lbs. per acre. The quality of the fibre, however, is said to be very similar to that of jute. 2. *Hibiscus esculentus*, the Ochro or Gombo, the fruits of which are eaten as a vegetable in nearly all countries where the plant is cultivated. It is a tall-growing annual, very widely distributed all over the tropics. The fibre is strong and pliable, and very white and silky in appearance. It is used in some parts of India for ropes and cordage, but as the plant is grown for the sake of the fruit the fibre has hitherto been neglected. That it is a good fibre there is but little doubt, but it has never received the attention due to its merits. As a paper material, however, it has been well reported on. 3. *Hibiscus tiliaceus*, known as the Bola in Bengal. This is a large bush; the abundance, and the ease with which it might be still further extended over tracts of country where little else will grow, together with the strong, useful, and jute-like fibre, are powerful reasons why the utilisation of the plant should be carefully considered. "The fibre is readily separated from the green or unsteeped branches, the work of preparation being less tedious than with the other fibre-yielding plants of the genus." It makes good ropes, cordage, and a useful paper material. 4. *Hibiscus collinus*, a native of India and Ceylon. The fibrous bark is said to peel off from the stem in long strips, and to be used by the natives for cordage, and as a substitute for hemp. No actual experiments seem to have been made with this fibre.

Thespesia populnea, a moderate-sized evergreen tree of the *Malvaceæ*, very common on the sea shores of most Eastern tropical countries, as well as in West Africa, the West Indies, South America, and the Pacific Islands. It is often planted for the sake of the shade that it affords in consequence of its spreading branches, the inner bark of which yields a quantity of strong fibre suitable for cordage, and used in Demerara for making coffee bags. In India it is not much used except in its rough state for tying up bundles of wood. In Burma, however, it is used for cordage. In the Kew Museum is a woman's dress from the Solomon Islands made of this fibre, which shows a soft silky character, and there is also a fishing net from the Admiralty Islands which illustrates its strength. (Fig. 7.)

Bombax malabaricum, Silk Cotton Tree or Semal, a very large deciduous tree belonging to the *Malvaceæ*, with branches in whorls spreading horizontally, and the stem with large thorny buttresses. It is a native of the forests in the hotter parts of India and Burma. The inner bark yields a good fibre suitable for cordage, though it has never been carefully examined. Surrounding the seeds and tightly packed away in a capsular fruit is a quantity of flossy silky hairs known as Silk Cotton or Semal Cotton. The fibres or staple of this floss are too short and too brittle for textile purposes, so that it cannot be spun by machinery, and though it is sometimes woven by hand in India the fabric so made has no strength or durability; except for stuffing pillows and cushions is is but little used even in India. It has been recommended for mixing with Kapok, the seed hairs of an allied plant next to be described, and it has also been spoken of as a paper material. A sample of cloth woven by hand from this floss in Assam is shown in the Kew Museum. (Fig. 8.)

Eriodendron anfractuosum, Kapok or White Silk Cotton Tree, a tall tree with straight trunk and horizontal whorled branches; the trunk, however, sometimes grows to a very large size, assuming a gouty appearance. (Fig. 9.) It belongs to the same natural order as the *Bombax*, and has a wide tropical distribution through India, Ceylon, South America, the West Indies, and tropical Africa. The fruits vary considerably in size and shape; the usual form is, however, about 3in. or 4in. long by 2½in. diameter across the centre, tapering at both ends. When ripe and dry it has a woody covering of a yellowish buff colour, and splits open longitudinally, exposing its silky fibrous contents. Under the name of Kapok this silky floss is now exported in very large quantities from Java both to Europe and Australia. It is a trade of quite recent creation, and was started entirely by the Dutch merchants. The only use to which it is put is for stuffing mattresses and cushions, being, like the floss of *Bombax malabaricum*, too short and brittle for spinning purposes. As a stuffing material it is, however, superior to that from *Bombax*, as it is said not to mat so readily. As an illustration of the rapidity with which this substance took in the European and Australian markets it may be stated that the exports from Netherlands India in 1882 amounted to 302,201 kilos, and in 1885 they had risen to 600,269 kilos.

Sterculia villosa, the Udal of Hindostan. It is a moderate-sized tree, belonging to the natural order *Sterculiaceæ*, and native of Western India, Bengal, Malabar, and tropical Himalaya. The fibre from the inner bark, though somewhat coarse, is very strong, and is much valued by the natives for making ropes and bags; to such an extent is it in request that it is said that in the more accessible forests the plant is seen only in the form of a bush, in consequence of the constant lopping of its branches to obtain the fibre. In Southern India and Burma its chief use is for making elephant ropes on account of its great strength. Referring to this fibre, Messrs. Cross and Bevan make the following comment: "Perhaps no fibre in India deserves to be more carefully examined for the purposes of the rope trade. A strong rope could be produced, but it may be doubtful whether the colour and lustre essential to a good selling rope could be obtained without expensive preparation." Amongst other species of *Sterculia* which might be found available as a fibre plant is *S. urens*, likewise an Indian species. (Fig 10.)

Abroma augusta, a small bush of the *Sterculiaceæ*, known as the Abrome. It is widely distributed, either in a wild or cultivated state, throughout the hotter parts of India. The bark abounds in a strong white fibre from which good cordage is made, and it deserves to be much better known than it is. It might be used with advantage as a substitute for silk, and the plant grows so quickly that three crops can be obtained in a year. It is a perennial, and is more easily cultivated than either jute or Sunn hemp, and the fibre is very easily and quickly separated by maceration. (Fig. 11.) Dr. Watt says :—

> With all these facts to recommend it, it seems remarkable that we should have had to urge the claims of this fibre for over fifty years without its having attained the high commercial rank which its great beauty, softness, cheapness, and durability deserve. There are many purposes to which jute is put nowadays which *Abroma* could meet with greater acceptance, and which it most certainly would by this time have supplied but for the early success of jute. The future seems likely to raise *Abroma*, however, to a position of great importance. . . . There can be no doubt, sooner or later, the trade in jute, having lost the enormous profits obtained during its early history, will subside into an old-established industry, and then, to meet the demand for some new fibre to give life to the progressive textile industries, attention will be turned to *Abroma* as being the most likely to prove the best and most acceptable to the owners of jute mills and jute machinery.

Honckenya ficifolia. A handsome flowering shrub, with purplish branches, native of Sierra Leone, Senegambia, the Cameroons River, and the Congo. The first intimation of this as a fibre-producing plant was brought to the notice of the Kew authorities in 1888, when a sample of the fibre, together with a specimen of the plant itself for its scientific determination, was received from the Governor of Lagos, under the name Bolobolo. The plant was at once proved to be *Honckenya ficifolia*, belonging to the *Tiliaceæ* and closely allied to the jute plant. Upon submitting the fibre to a well-known firm of London fibre brokers they reported, under date of December 17th, 1888, as follows :—

> We consider this a very valuable fibre of the jute class, but distinctly superior to the latter in many respects, and more particularly in strength. It is of good length and well cleaned. If this fibre is capable of being produced in large quantities there is a very wide field open to it commercially. Its market value would be regulated by that of jute, but in our opinion it would always command a higher price; at to-day's currencies it would sell at £16 per ton in London. We do not think the minimum price would ever fall below £12, and if the jute market made a further advance this Bolobolo fibre might realise £20. If this fibre could be prepared of a white colour it would prove still more acceptable; but, even as it is, we should be very glad to see large quantities placed on this market, where they would sell readily.

The sample here referred to is preserved in the Kew Museum, but

I am not aware that the fibre has ever come into actual commerce. (Fig. 12.)

Corchorus capsularis and *C. olitorius.* These plants yield jute and are annuals belonging to the same natural order as the last, namely, *Tiliaceæ.* Largely cultivated throughout the hotter parts of India, as well as in most tropical countries. The interest attaching to jute in consequence of the rapidity with which its use has spread in Europe, and as an example of what may be done with a really useful fibre, is the reason of introducing it in this paper. The fibre is too well known to need description, but a few facts connected with its history may be both useful and interesting to those concerned in the introduction of new fibres. That jute was known to the Indian people at a comparatively remote period there seems but little doubt, but from the confusion of the native names of this and other fibrous plants its early history cannot be satisfactorily proved. According to Dr. Watt, the first commercial mention of the name jute dates from 1828, when 364cwt. of gunny bags made of this fibre were sent from India to Europe. The quantity of bags exported continued to increase, and soon a large export of the fibre itself was sent to Scotland and the mills started in Dundee. Fibre mills were afterwards established in India, and the trade in jute fibre spread rapidly. In 1869-70 6,441,863 gunny bags were exported from India, which had increased in 1879-80 to over 55,908,000. The imports of jute to this country amounted in 1894 to 338,874 tons, valued at £4,615,965. (Fig. 13.)

Linum usitatissimum, Flax. The remarks made in the last paragraph with reference to the well-known character of jute apply with even more force to the knowledge and reputation of flax, but, as no summary of fibres could be made without giving an example of what is for all essential purposes the perfection of a textile fibre, I have thought it best to include the flax plant in its proper botanical order *(Lineæ),* to show that it is not always that botanically allied plants furnish fibres of anything like equal value. As a general rule such is the case, but there are exceptions, and jute and flax are notable exceptions. Though the two plants are not actually members of the same family, they belong to closely allied orders, the one (jute) producing a fibre of decidedly inferior strength, while the other (flax) has maintained a reputation for strength and durability from very early ages, and that this reputation is maintained, and the supply of flax to this country but little diminished, notwithstanding the interest in new fibres, will be seen by the returns, which show that in 1894 71,701 tons of flax were imported into this country, of the value of £2,526,207. (Fig. 14.)

Crotalaria juncea, Sunn Hemp, Indian Hemp, or Jubbulpore Hemp. This is a stiff-growing shrub, several feet high, with slender rigid branches, belonging to the natural order *Leguminosæ*, and an ally to the common furze. It is cultivated for the sake of the fibre in almost every province in India, and is found also in the Malay Islands and Australia. Western and Southern India, however, produce the best qualities of Sunn hemp. Messrs. Cross and Bevan refer to the fact that both Roxburgh and Royle showed beyond all doubt that Sunn fibre was far superior to jute, which fact they say is confirmed by their own recent chemical and microscopical investigations. Royle proved that a cord of best St. Petersburg hemp broke with a weight of 14 tons 8cwt. 1qr., while a similar rope of Sunn only gave way with 15 tons 1cwt. 1qr.

> It is impossible to urge too strongly the claims of this much-neglected fibre, a fibre which seems to have suffered severely through the immense success of jute, obscuring for a time the properties of all other fibres. At the beginning of the century Sunn hemp held a much more important position than it does to-day, and all efforts to cultivate the true hemp in India were abandoned from the impression that the so-called indigenous hemp was, for all practical purposes, of equal merit. During the Colonial and Indian Exhibition numerous inquiries were made as to why it was that so little of the better qualities of Sunn hemp were procurable.

And it was stated by brokers and merchants generally that the only difficulty in pushing the trade was the inability to procure a uniform and large enough supply. The fibre is separated from the stem by retting, much in the same way as that practised with jute, though it is said that experience has shown that the fibre of the Sunn is stronger when the plant has not only been allowed to flower but to ripen its seeds. It is also better to ret the stem soon after cutting. The plant requires a light but not a rich soil, as the yield of fibre has been proved to be less in a rich than in a poor soil, but the plant cannot be grown on clay. The average outturn of cleaned fibre per acre has been variously estimated by some at 640lbs., by others at 700lbs., and by others at much less. (Fig. 15.)

Amongst other species of *Crotalaria* yielding good fibre which is said to be used more or less in place of the true Sunn hemp may be mentioned *C. Burhia*, a low undershrub, abundant in the sandy plains of Sind, Punjab, Rajputana, and Cambay.

Sesbania aculeata, a leguminous shrubby annual, is known as Dhunchi, and is often met with under cultivation on the plains of India from the Western Himalaya to Ceylon and Siam, besides which it has a wide distribution throughout the tropics of the old world. The plant is hardy, and is grown readily on wet soil. The best time for sowing the seed is after the ground has been moistened by showers in April and May. About 30lbs. of seed is allowed to an acre, and very little weeding or other attention is required. The crop is ready to cut in September or October, but it can well be left till November without any injury to the fibre, which, when properly prepared, is very strong, forming a good substitute for hemp, and of much greater strength and durability than jute. (Fig. 16.)

Pueraria thunbergiana. This is known as the Ko Hemp, and is a trailing or climbing plant belonging to the natural order *Leguminosæ*, and native of China and Japan. The fibre is obtained from the stems, and has long been used in China and Japan for weaving articles of summer clothing, especially under-garments, as it is said not to cling to the body when heated like fabrics made of other fibres. (Fig. 17.)

Calotropis gigantea, Madar, Mudar, or Yercum, an erect spreading perennial shrub, belonging to the natural order *Asclepiadaceæ*, found chiefly on waste lands in India, ascending to 3,000ft. in the Himalayas, and extending from the Punjab to Southern India, Assam, Ceylon, Singapore, Malay Islands, and South China. This plant furnishes two distinct fibres, namely, a bast fibre from the bark and a floss or silk cotton from the seeds; that from the bark is obtained chiefly from the young shoots and branches, and is a very valuable fibre; indeed, it has been reported upon as one of the strongest and finest, and at the same time one of the most beautiful of vegetable fibres. The difficulty in connection with it hitherto has been in rapidly and cheaply separating and cleaning it. As prepared by the natives no water is used, as it is said that water spoils it. The sticks are cut of different lengths and the bark peeled off and the fibres then simply removed from the stem by hand. It has been suggested that a machine might be found to do this work more cheaply and expeditiously. More recent experiments, however, have brought out the opinion that though the fibre is undoubtedly of good quality, white, strong, and silky, the cost of obtaining it on a large scale would prohibit its general exportation; added to this the small proportion of the yield of fibre in comparison with the weight of stem and the shortness of the fibres themselves due to the closeness of the joints are also objections. At the same time Dr. Watt remarks that "the attempts made by manufacturers hitherto would seem not to have been conducted on a sufficiently extended scale to justify the expression of strong expectations or to dispel such hopes." The plant thrives on soils where nothing else will grow, and needs neither cultivation nor water; hence it is adapted for bringing waste land under tillage and for protecting unclaimed land from drifting sands. These reasons ought to have much force in the extension of its growth. When raised from seed it is said to

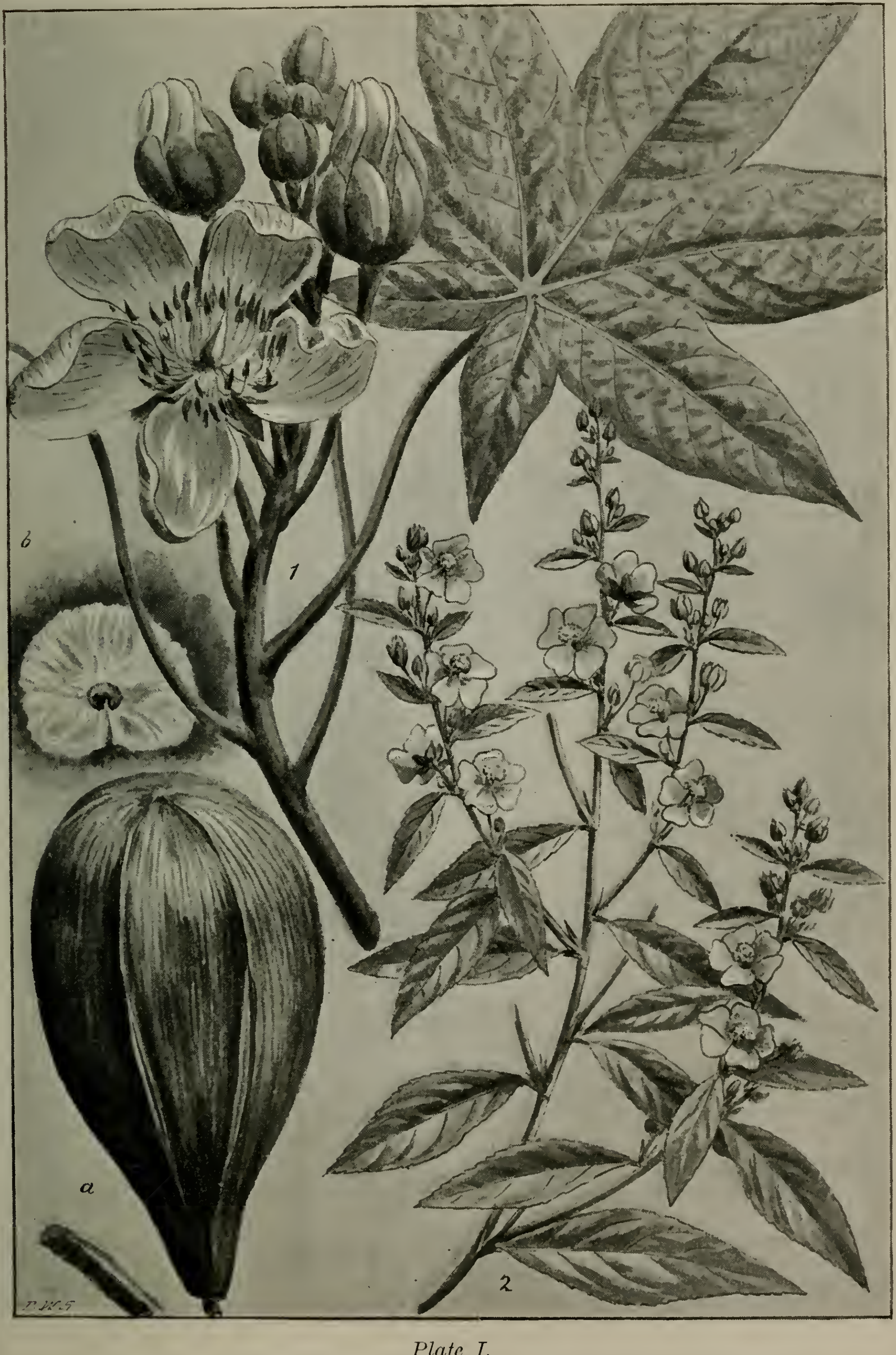

Plate I.

Fig. 1.—Cochlospermum Gossypium. *(a)* Capsule. *(b)* Seed.
Fig. 2.—Sida rhombifolia.

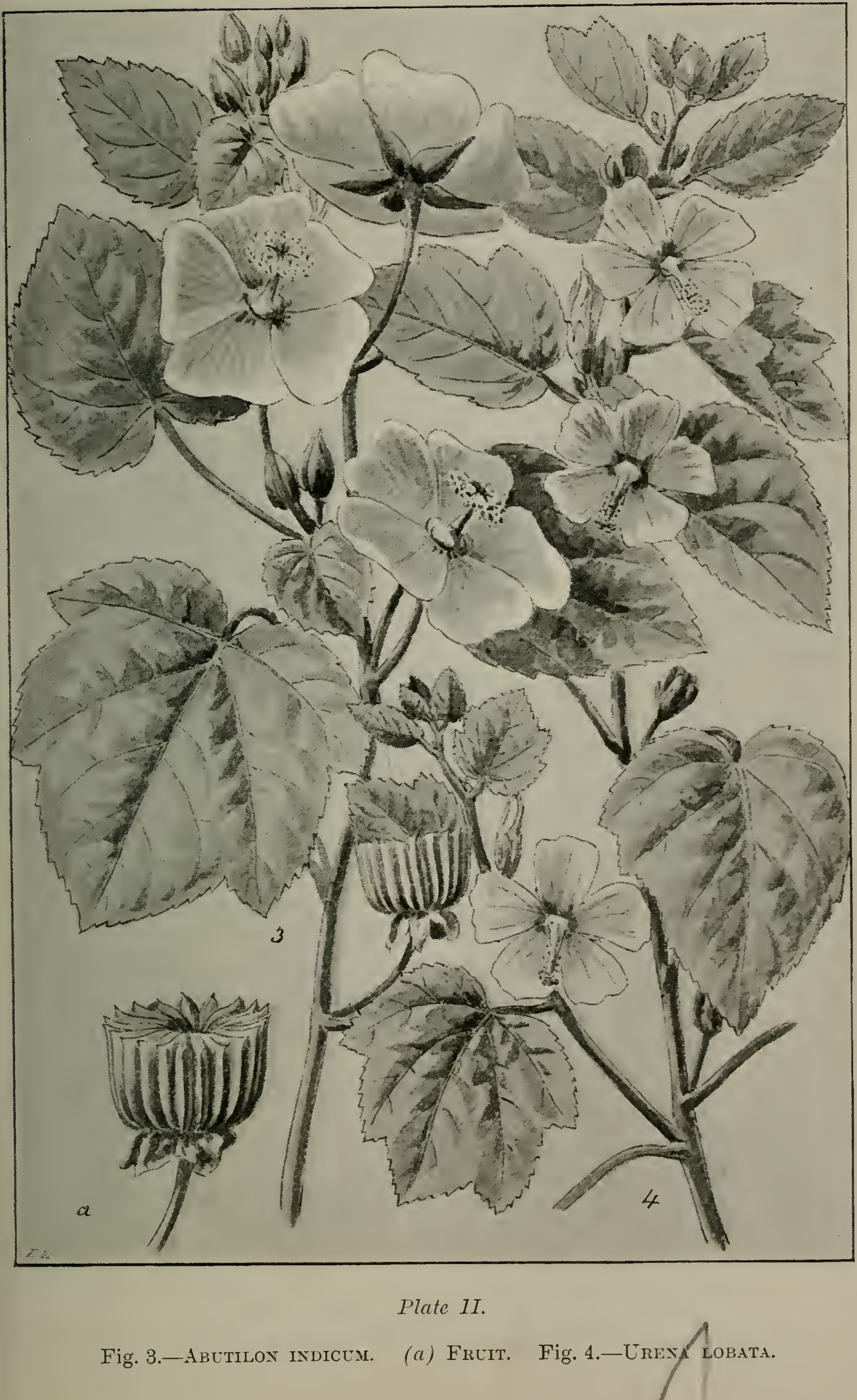

Plate II.

Fig. 3.—Abutilon indicum. *(a)* Fruit. Fig. 4.—Urena lobata.

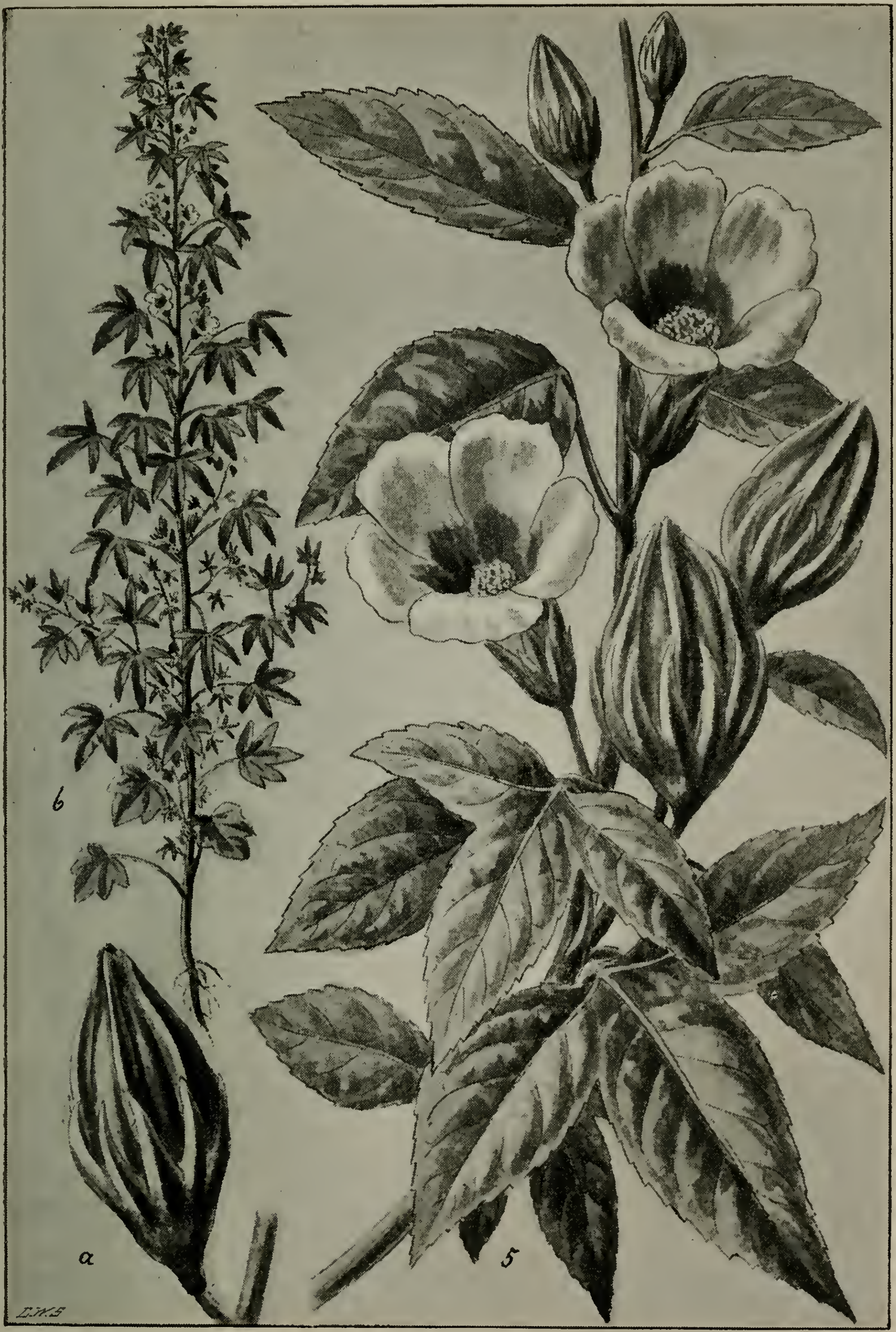

Plate III.

Fig. 5.—Hibiscus Sabdariffa. *(a)* Calyx.

Fig. 6.—Hibiscus cannabinus.

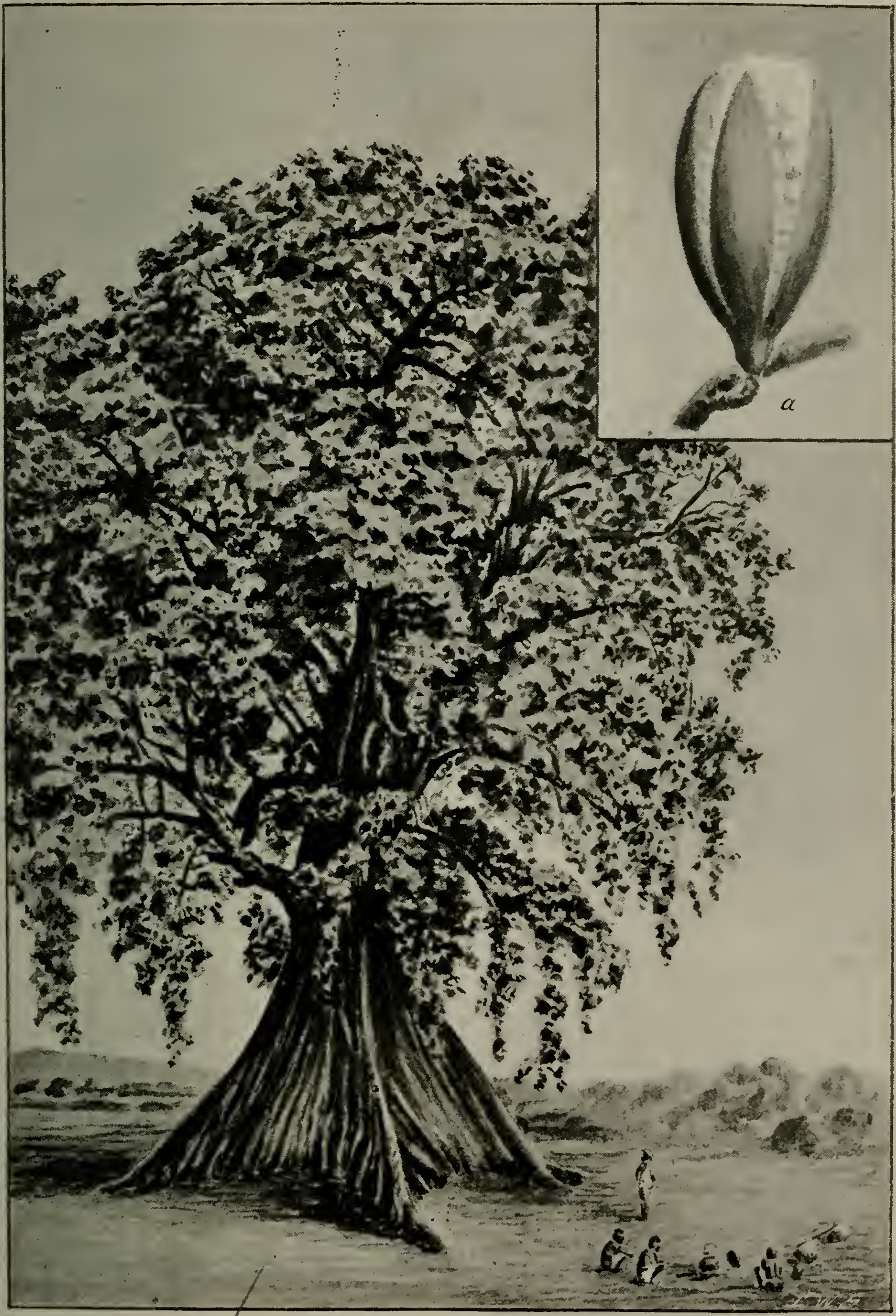

Plate IV.

Fig. 8.—Bombax malabaricum. *(a)* Capsule.

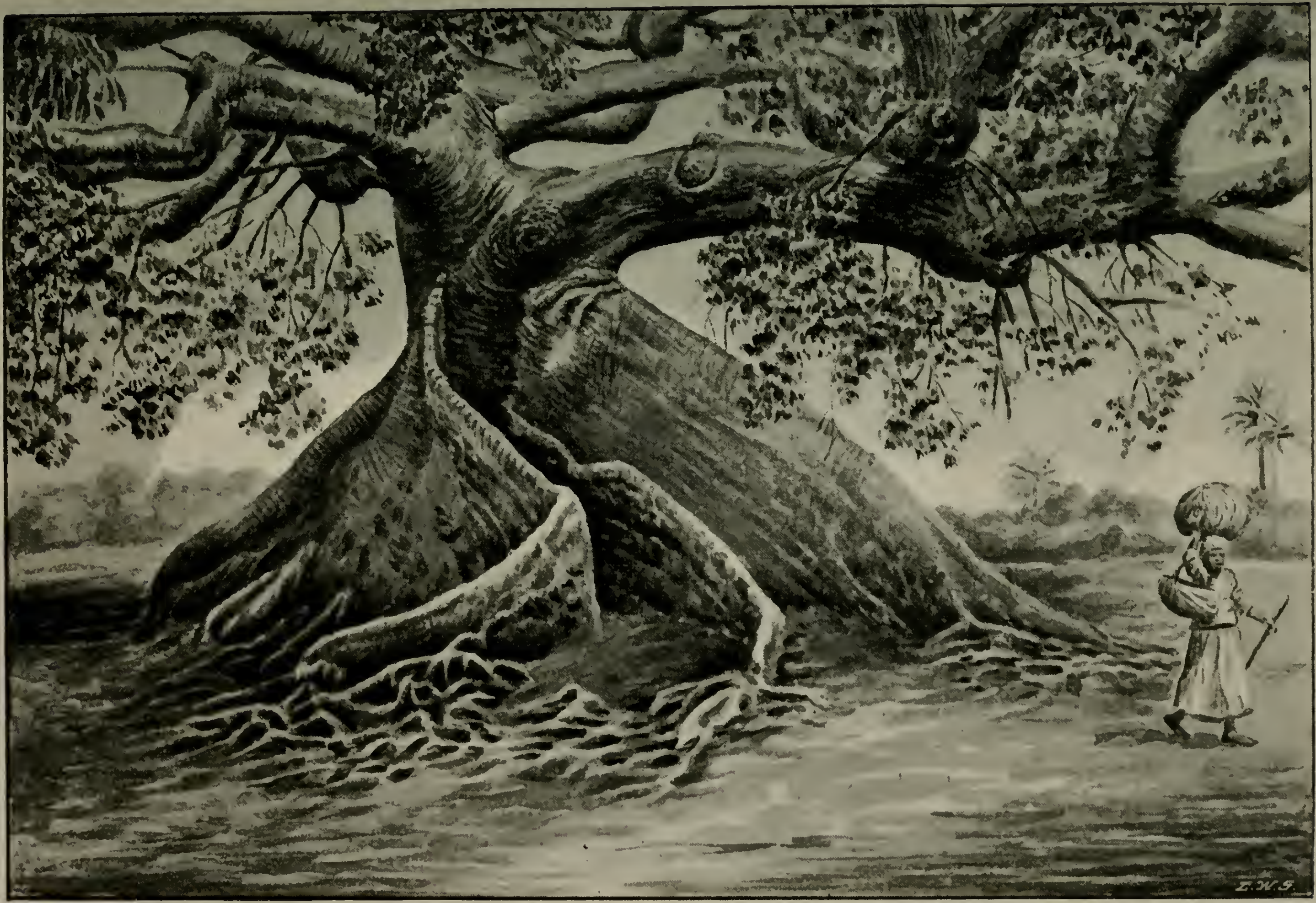

Plate V.

Fig. 9.—Eriodendron anfractuosum.

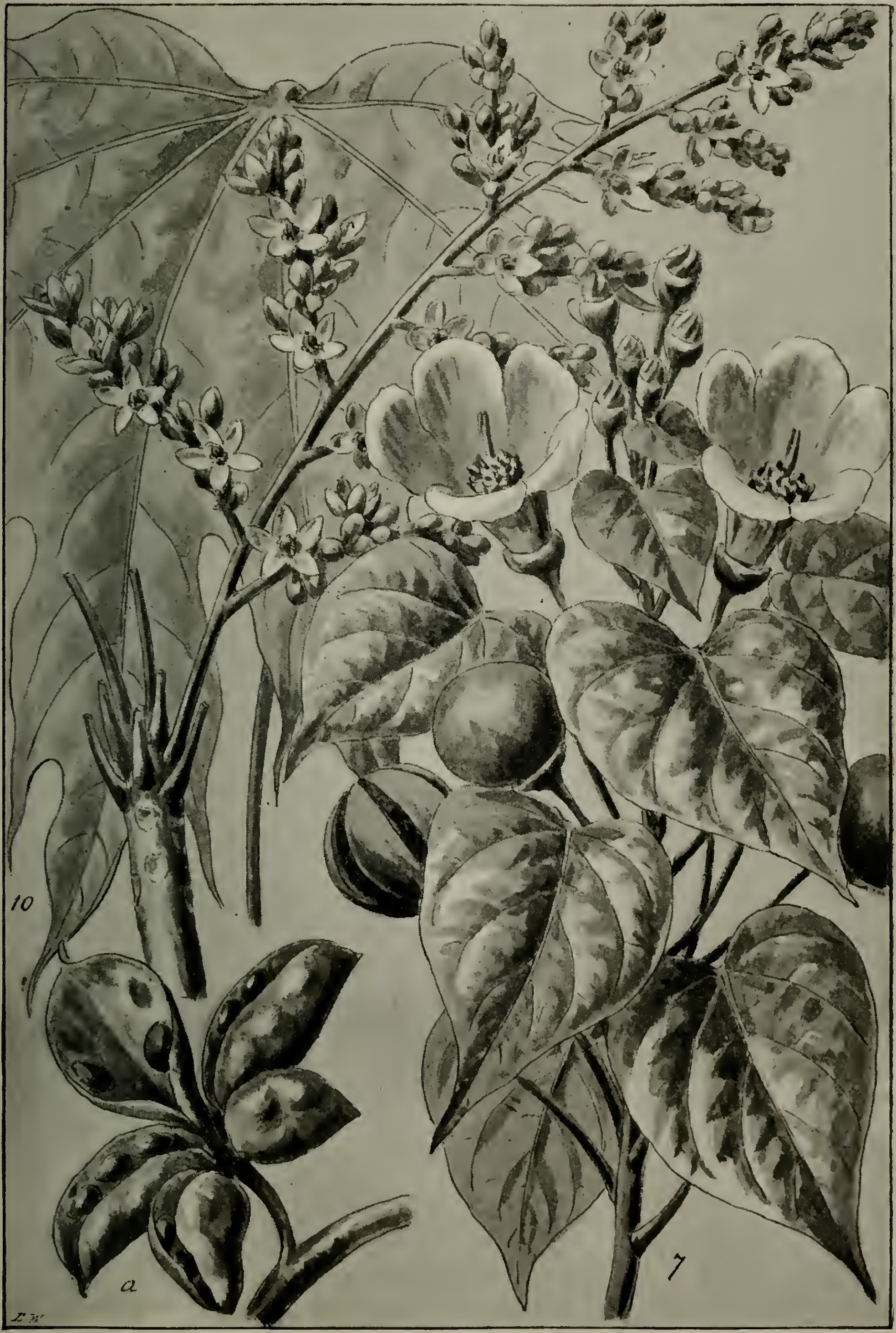

Plate VI.

Fig. 7.—Thespesia populnea. Fig. 10.—Sterculia villosa. *(a)* Fruit.

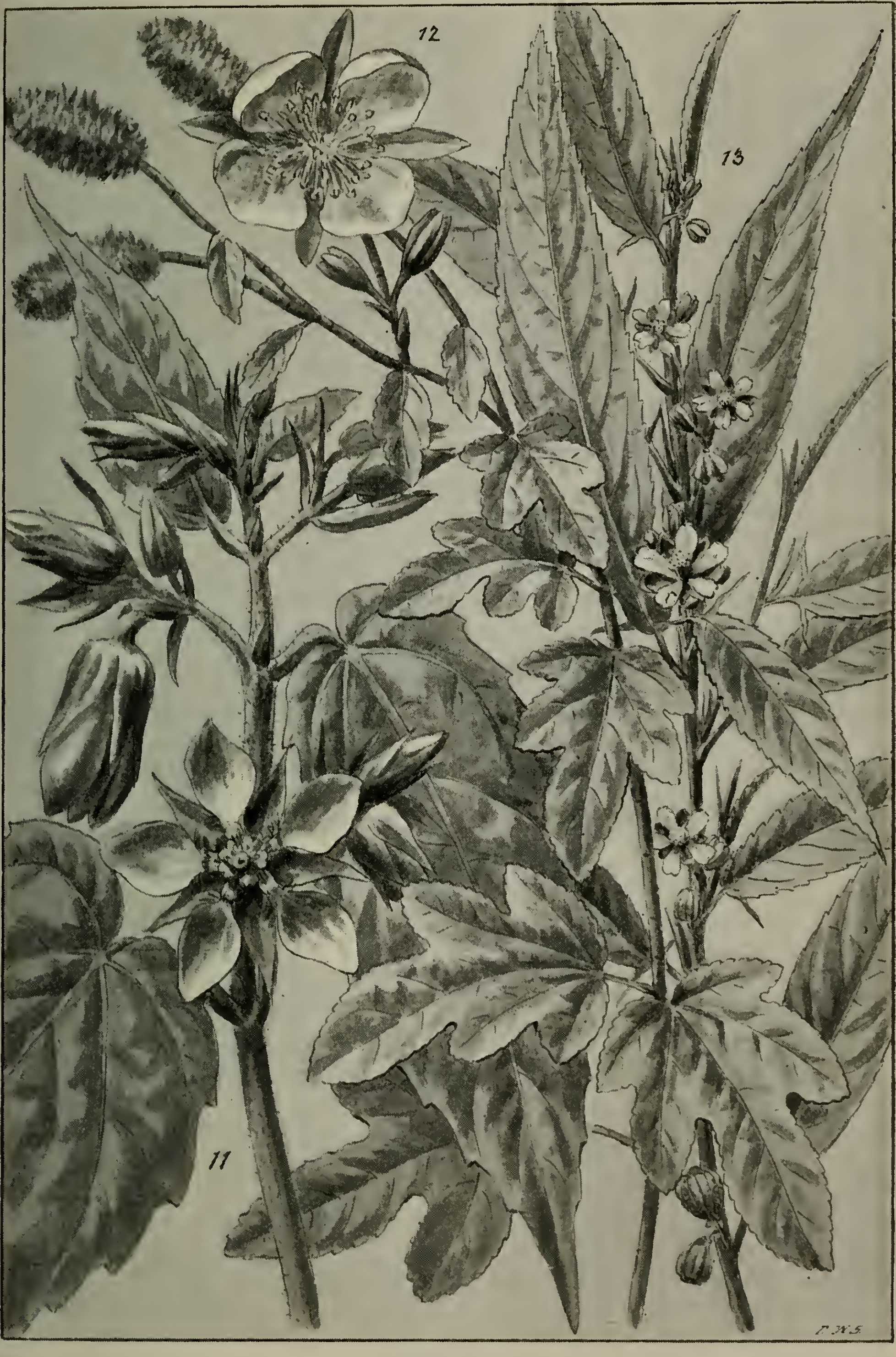

Plate VII.

Fig. 11.—Abroma augusta. Fig. 12.—Honckenya ficifolia.
Fig. 13.—Corchorus capsularis.

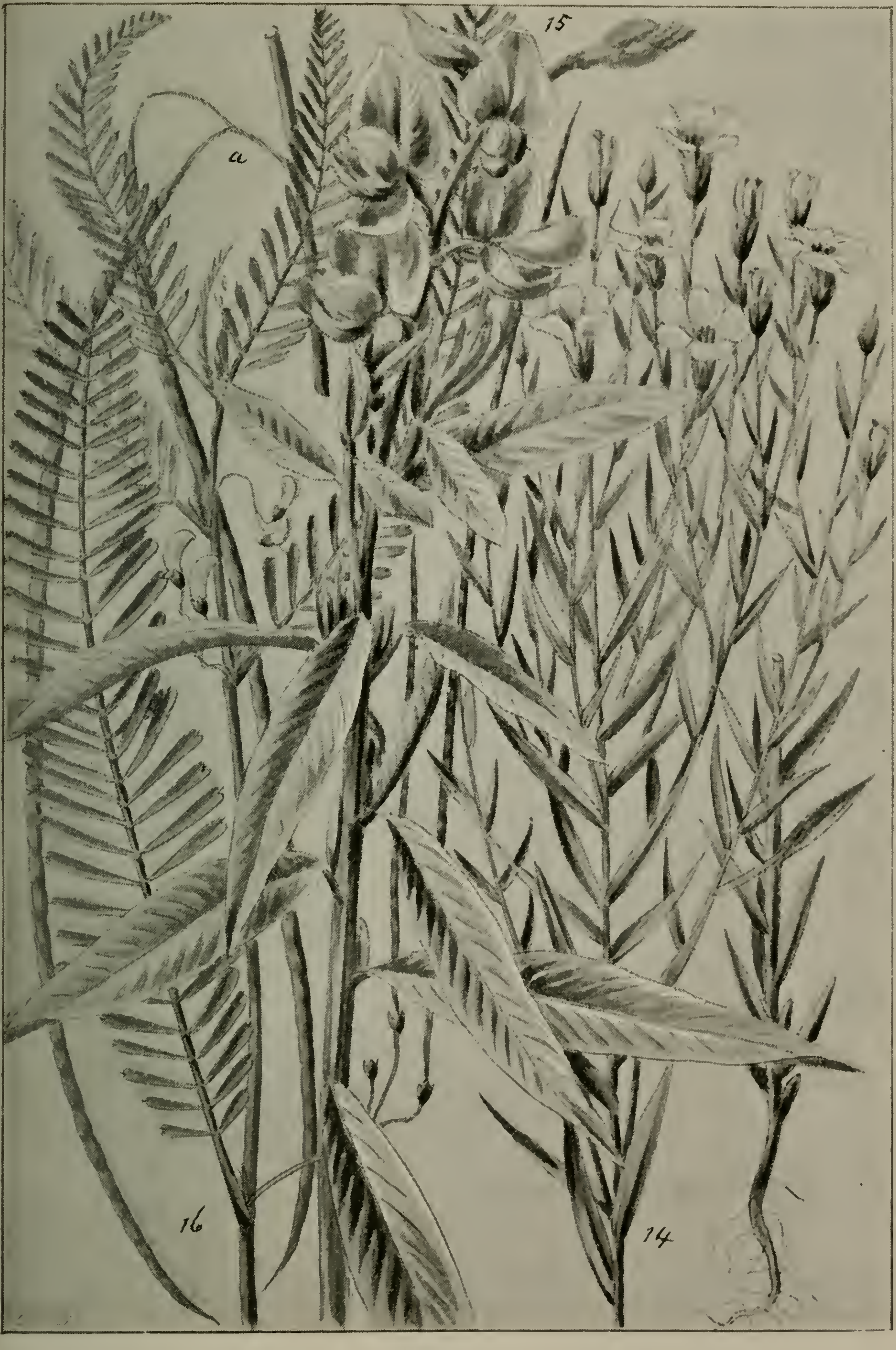

Plate VIII.

Fig. 14.—Linum usitatissimum. Fig. 15.—Crotalaria juncea.
Fig. 16.—Sesbania aculeata. *(a)* Fruit.

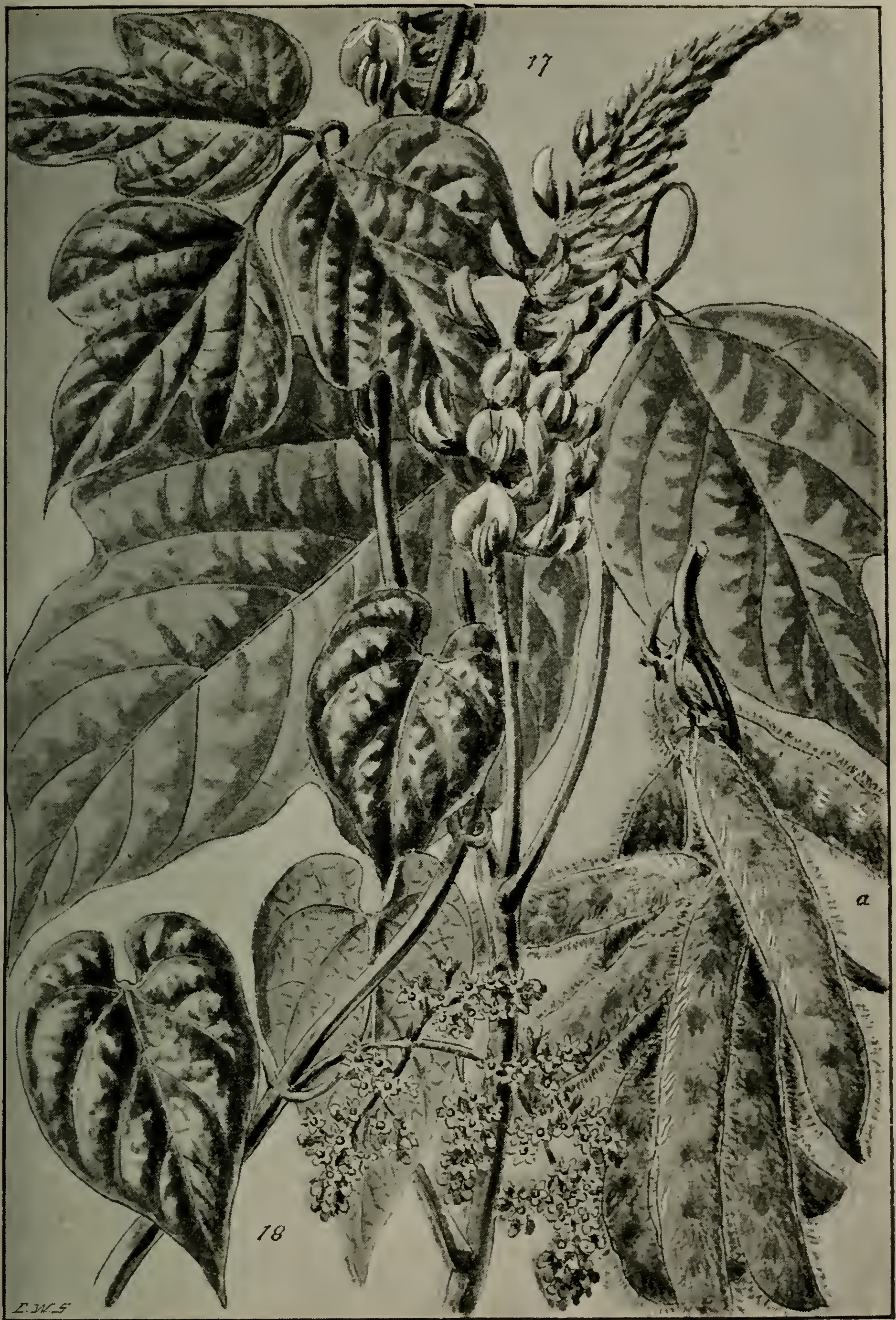

Plate IX.

Fig. 17.—Pueraria Thunbergiana. *(a)* Fruit.
Fig. 18.—Marsdenia tenacissima.

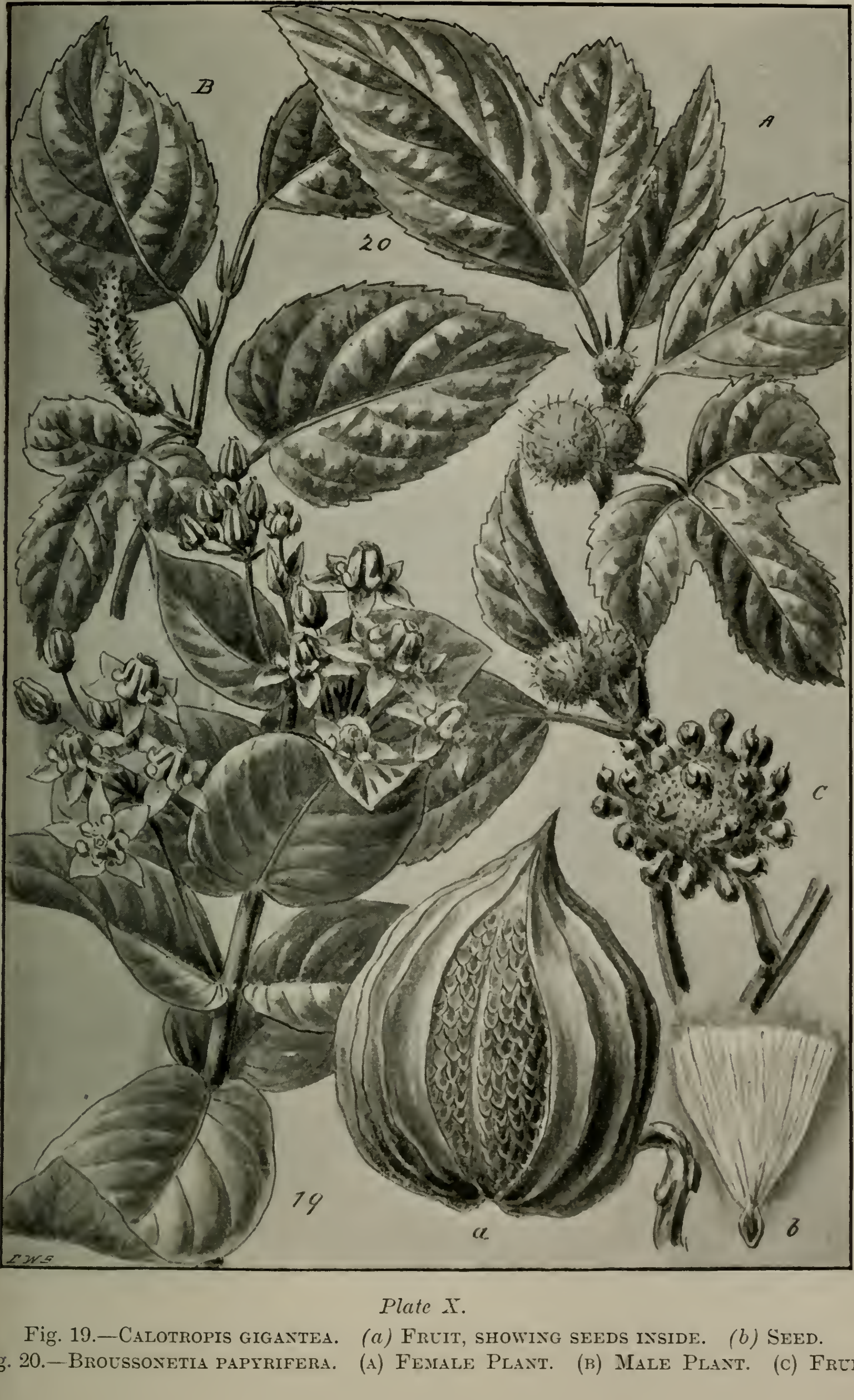

Plate X.

Fig. 19.—Calotropis gigantea. *(a)* Fruit, showing seeds inside. *(b)* Seed.

Fig. 20.—Broussonetia papyrifera. (a) Female Plant. (b) Male Plant. (c) Fruit.

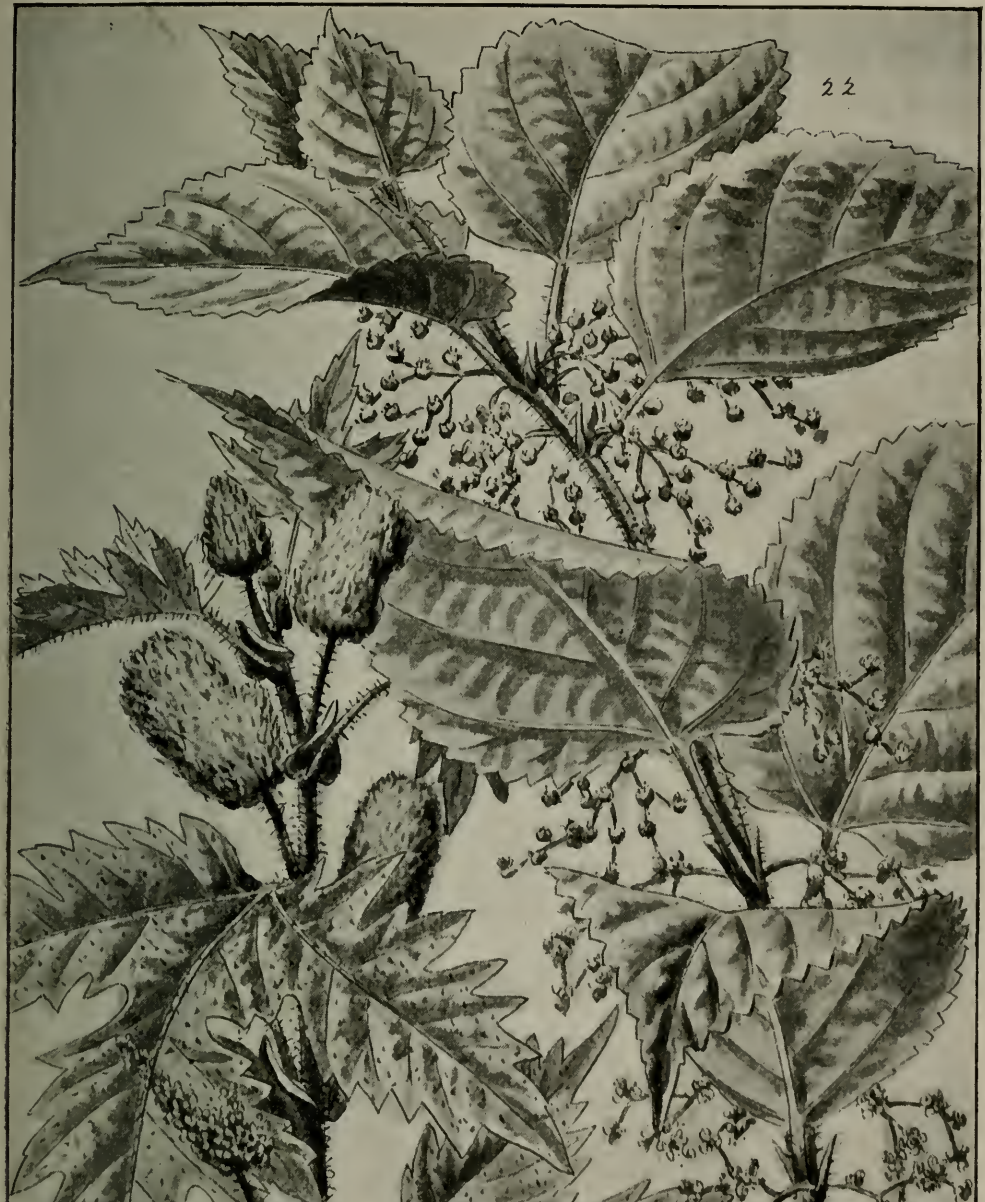

Plate XI.

Fig. 21.—GIRARDINIA HETEROPHYLLA. Fig. 22.—BŒHMERIA NIVEA.

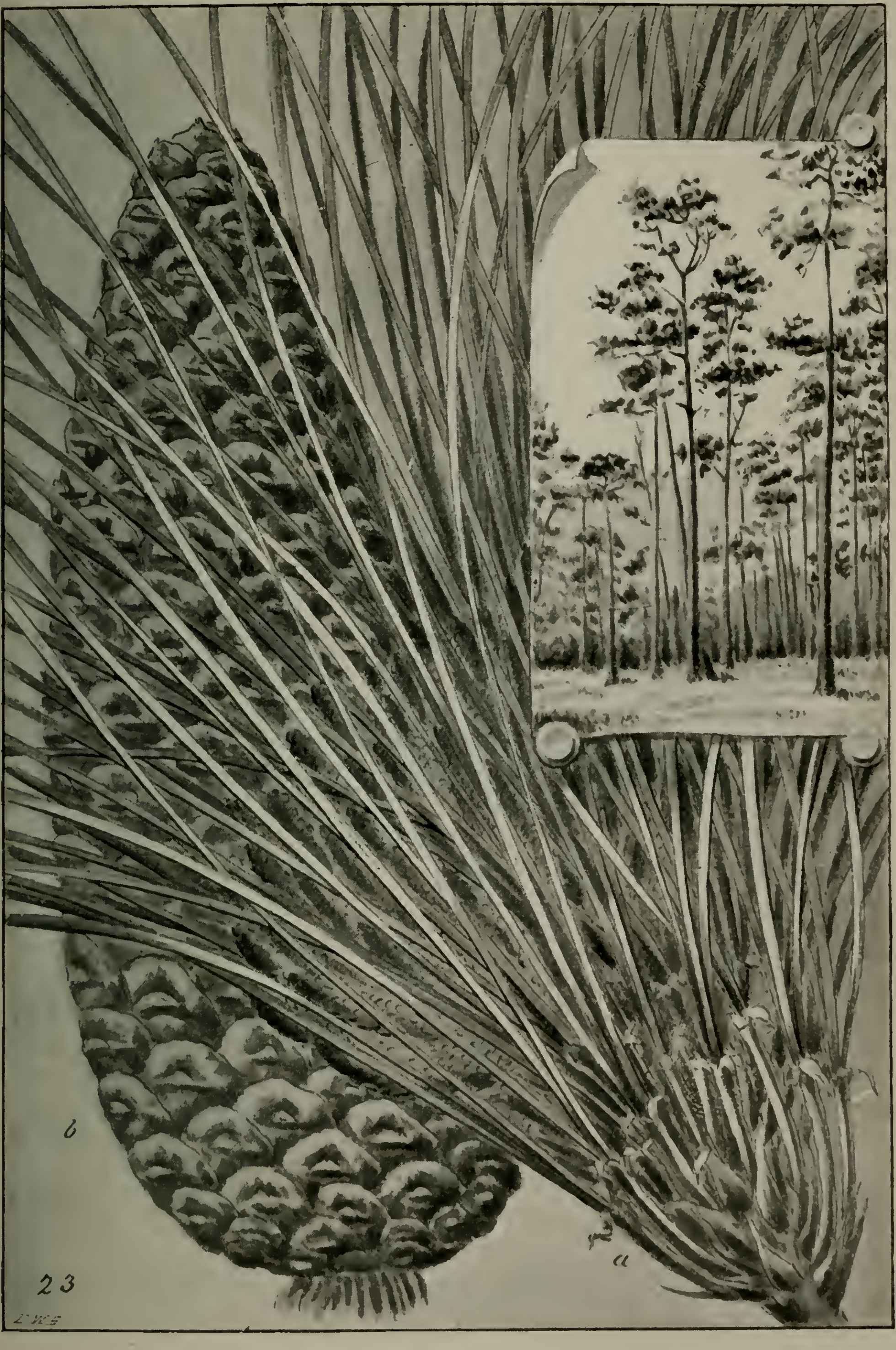

Plate XII.

Fig. 23.—Pinus palustris. *(a)* Male Flower Shoot and Leaves.
(b) Cone.

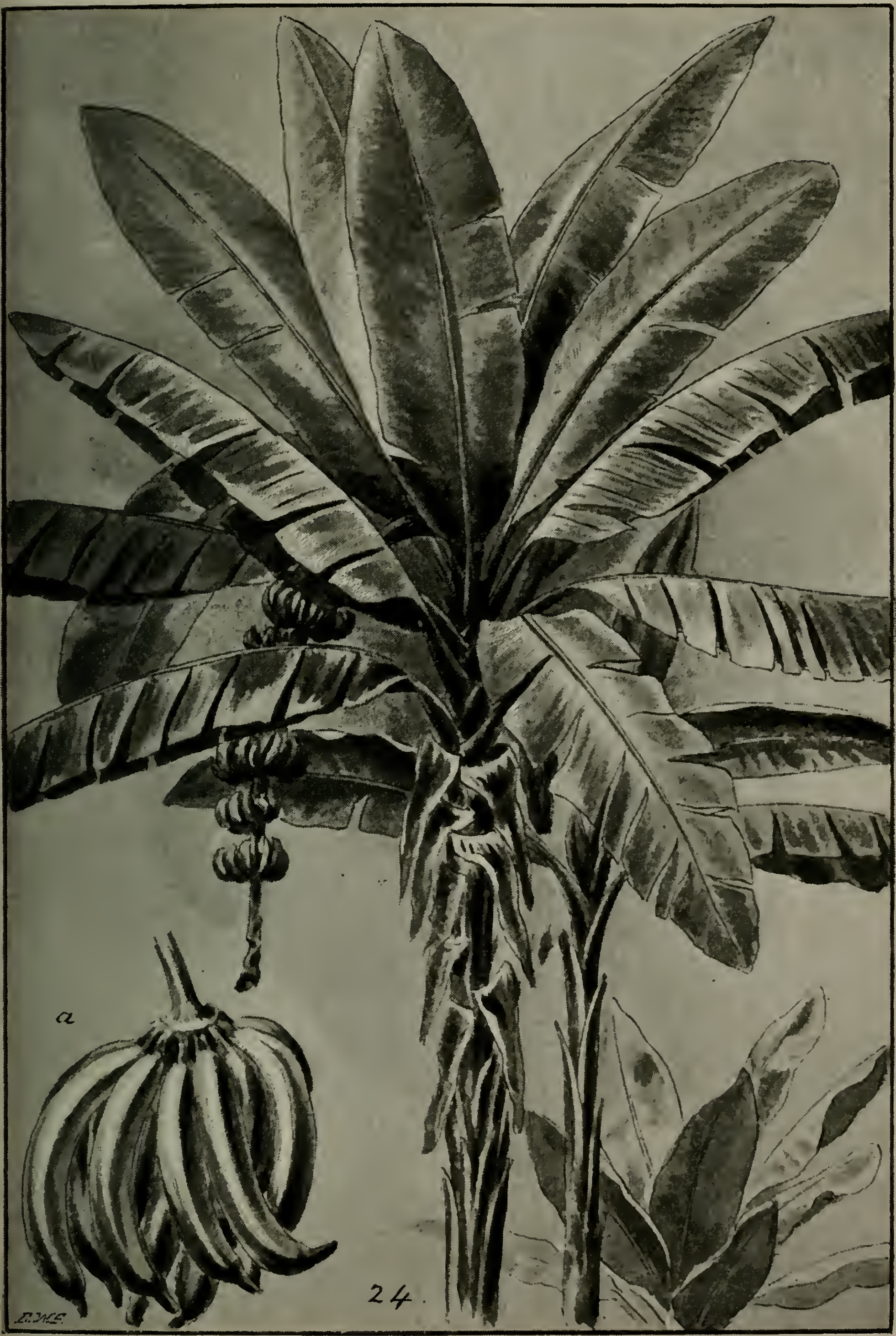

Plate XIII.

Fig. 24.—Musa sapientum. (*a*) Fruit.

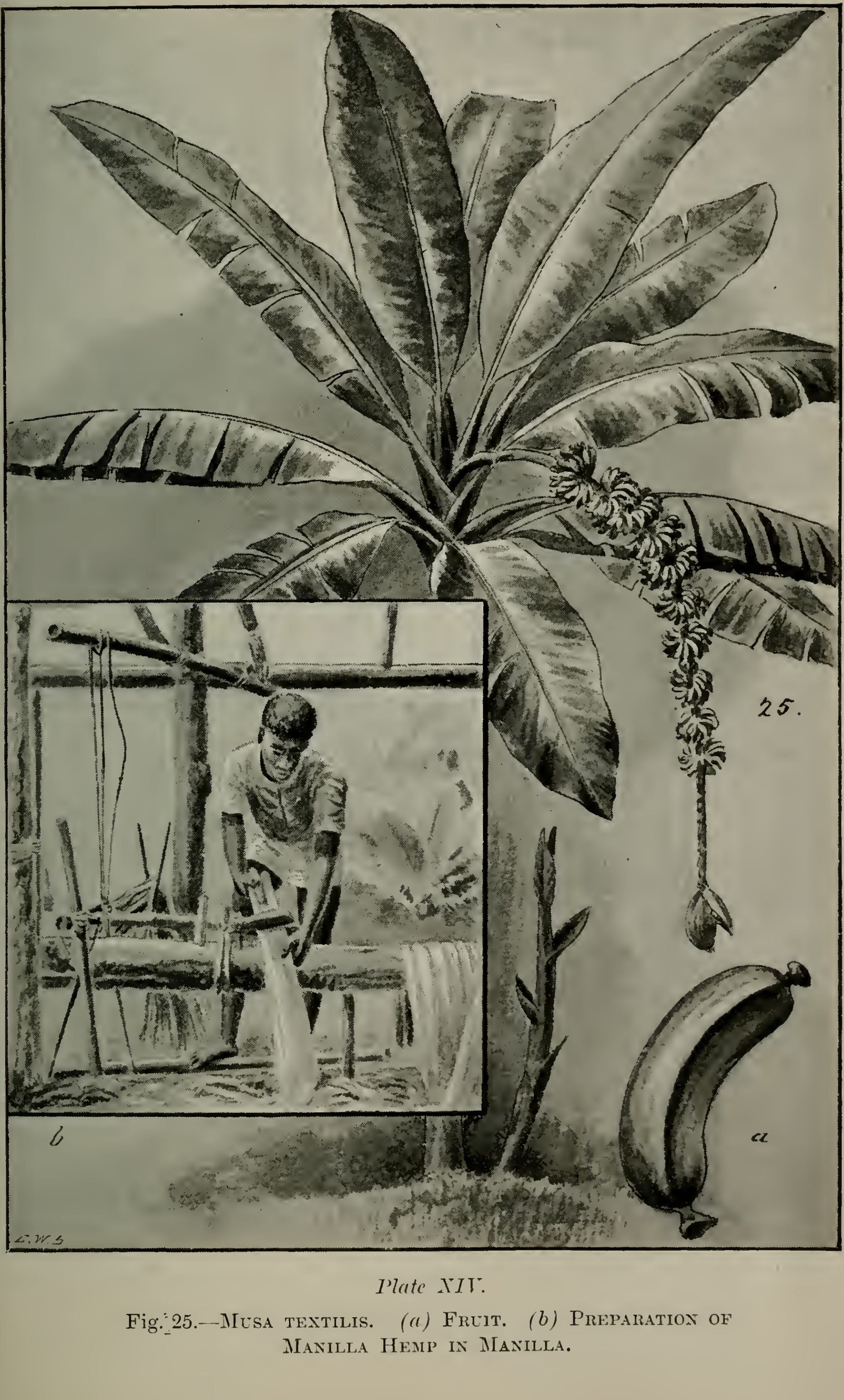

Plate XIV.

Fig. 25.—Musa textilis. *(a)* Fruit. *(b)* Preparation of Manilla Hemp in Manilla.

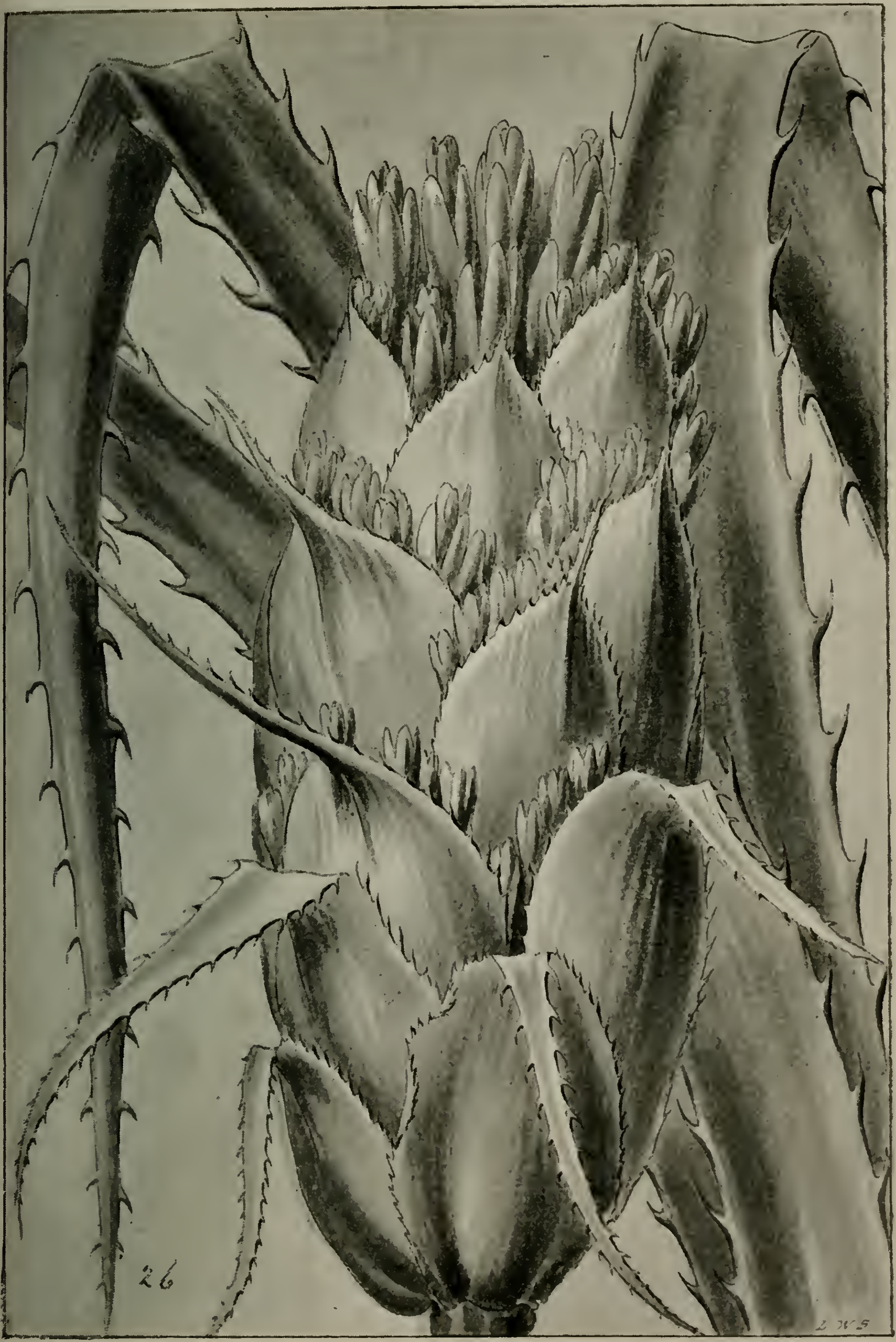

Plate XV.

Fig. 26.—Bromelia argentina. Flower head and leaves.

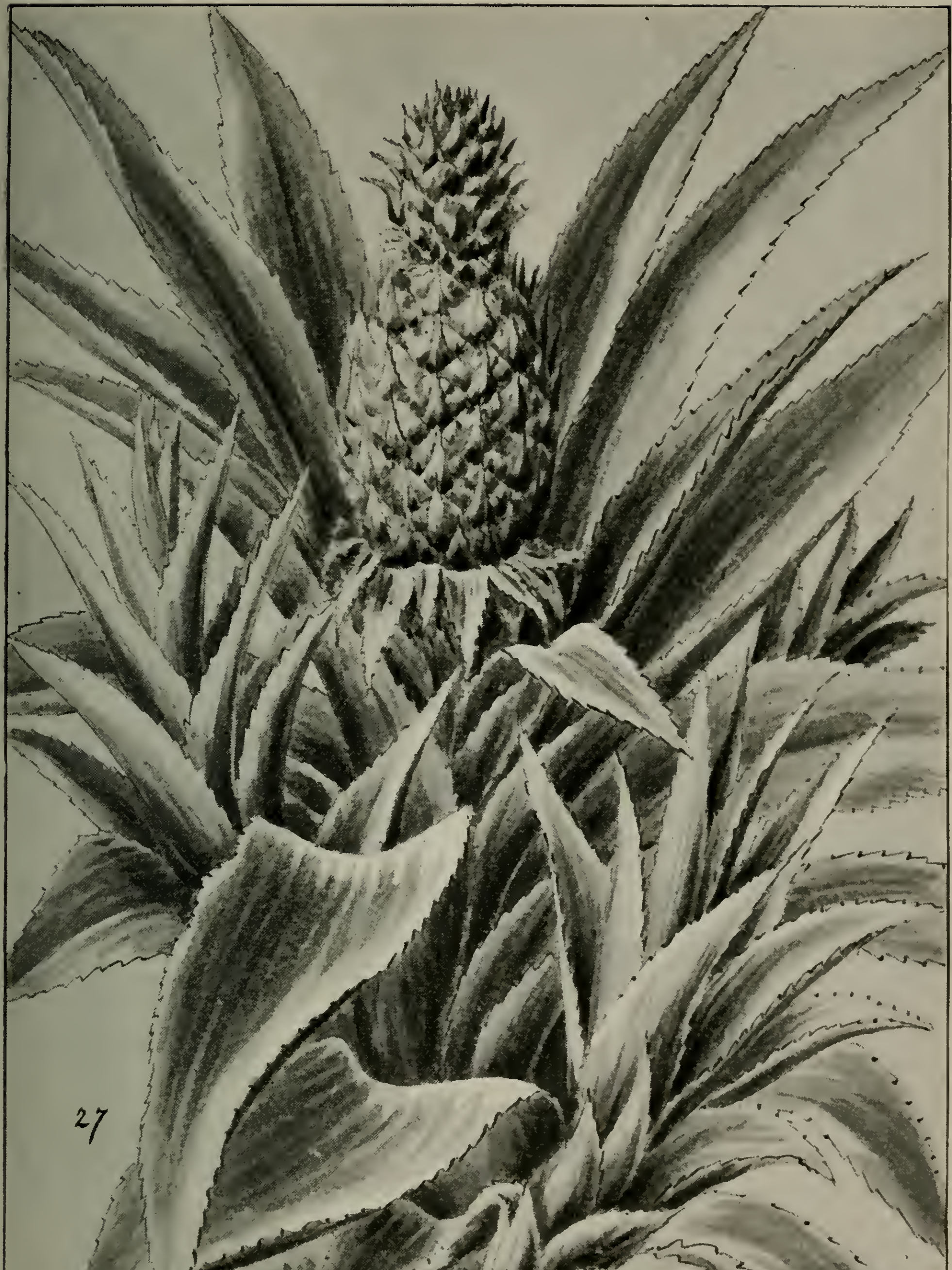

Plate XVI.

Fig. 27.—Ananas sativus.

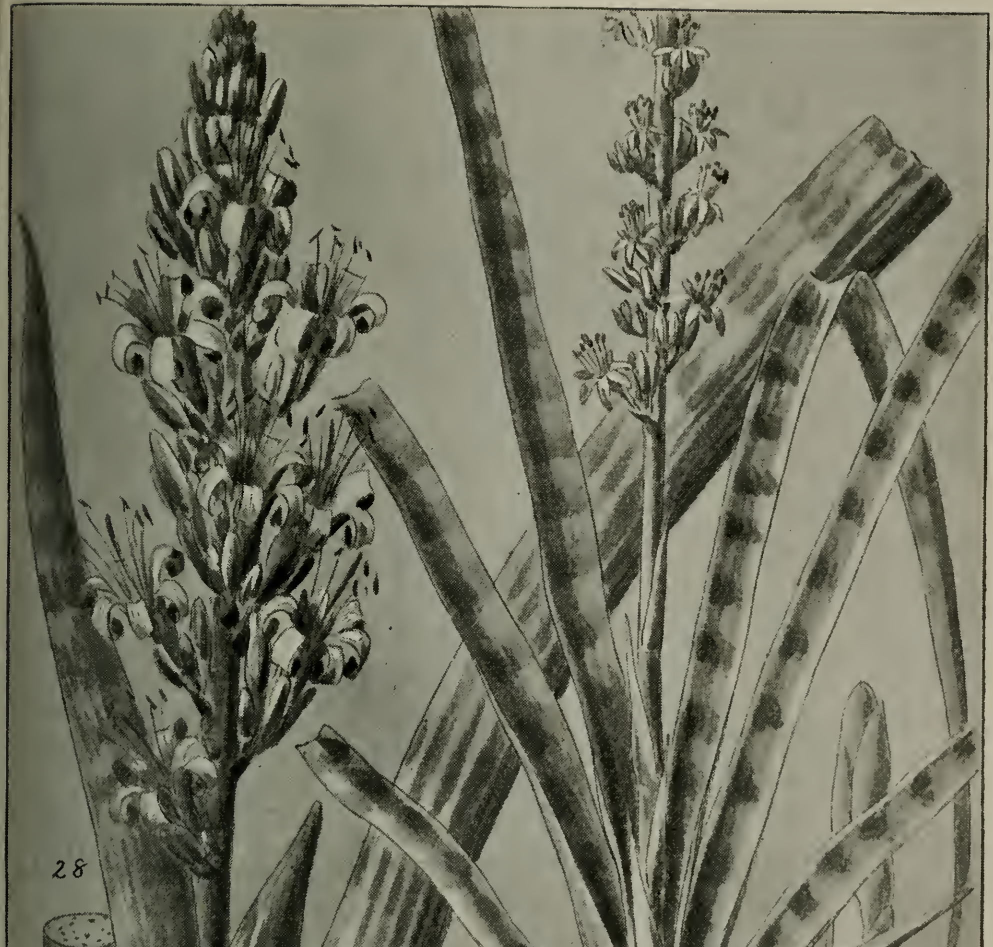

Plate XVII.

Fig. 28.—Sansevieria cylindrica. Fig. 29.—Sansevieria zeylanica.

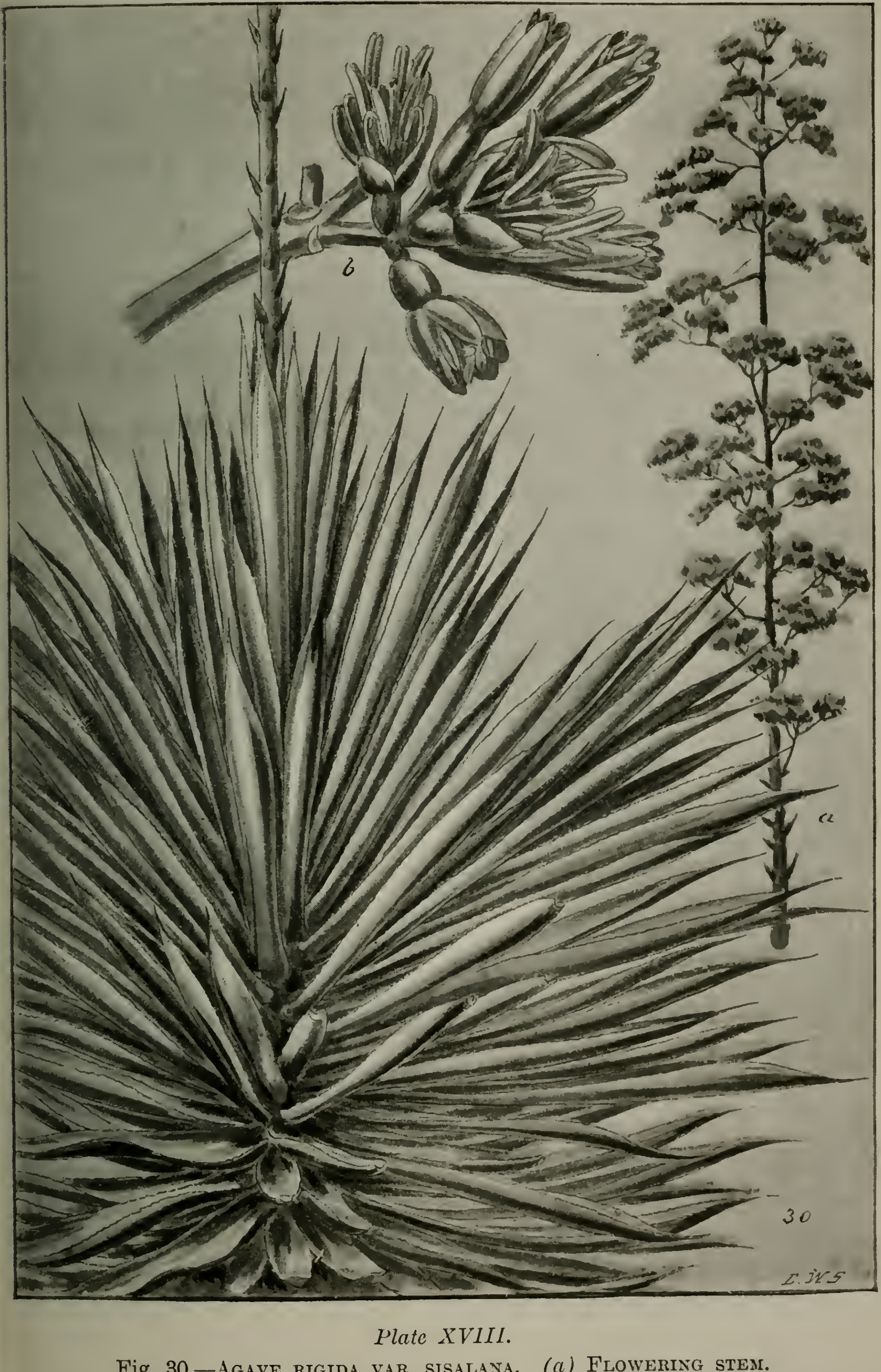

Plate XVIII.

Fig. 30.—Agave rigida var. sisalana. *(a)* Flowering stem.
(b) Flowers.

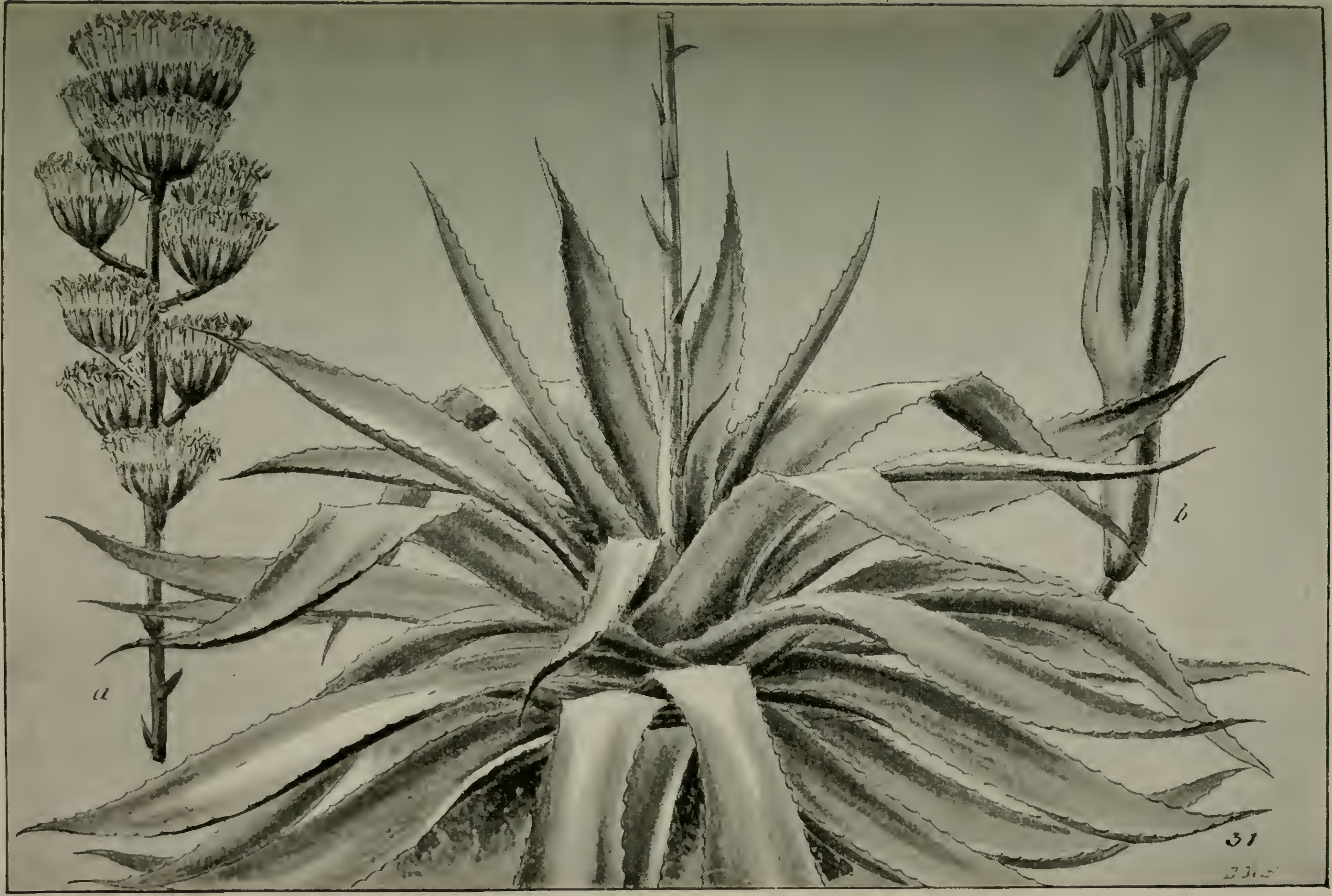

Plate XIX.

Fig. 31.—AGAVE AMERICANA. (*a*) FLOWERING STEM. (*b*) FLOWER.

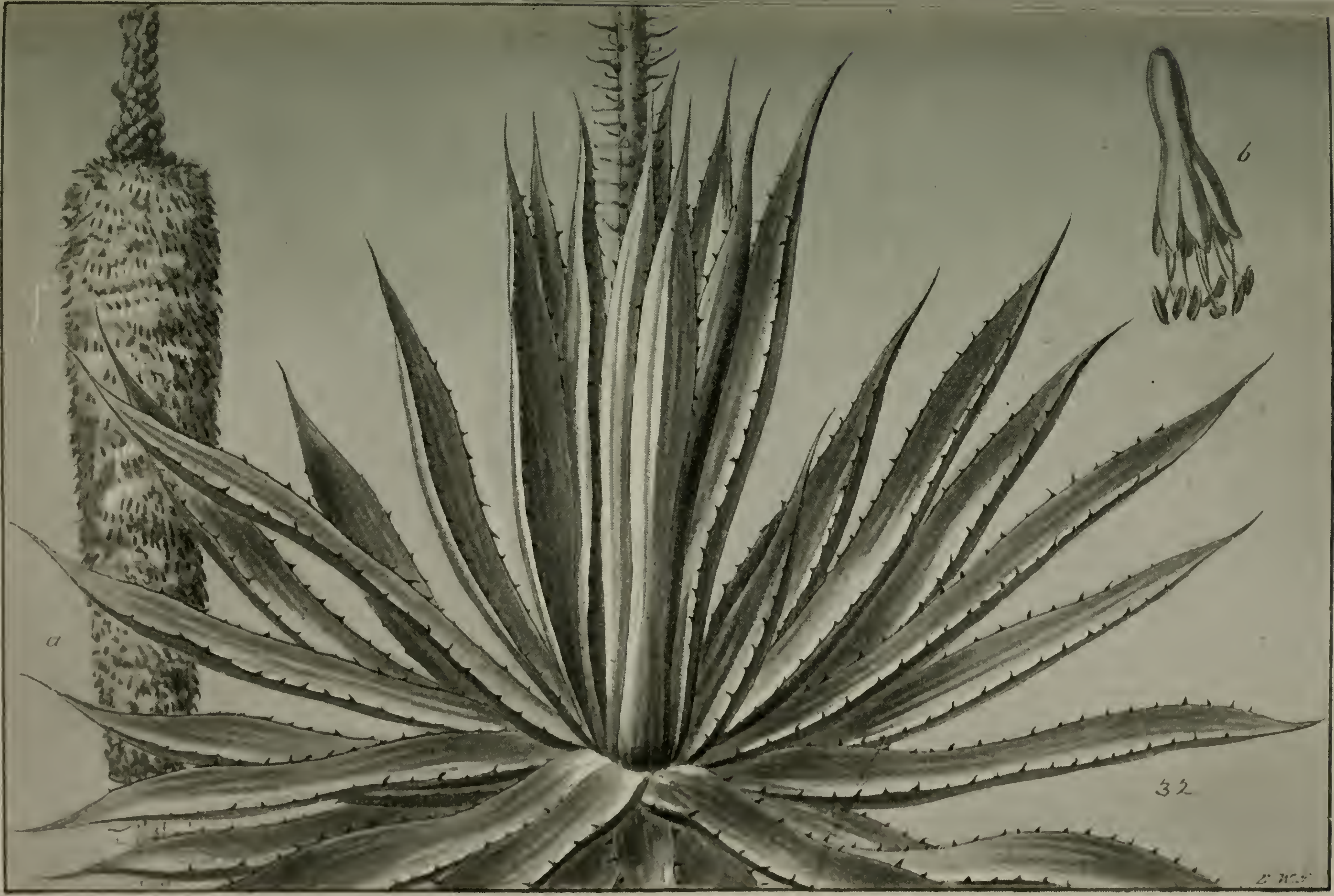

Plate XX.

Fig. 32.—Agave heteracantha. (*a*) Flowering stem. (*b*) Flower.

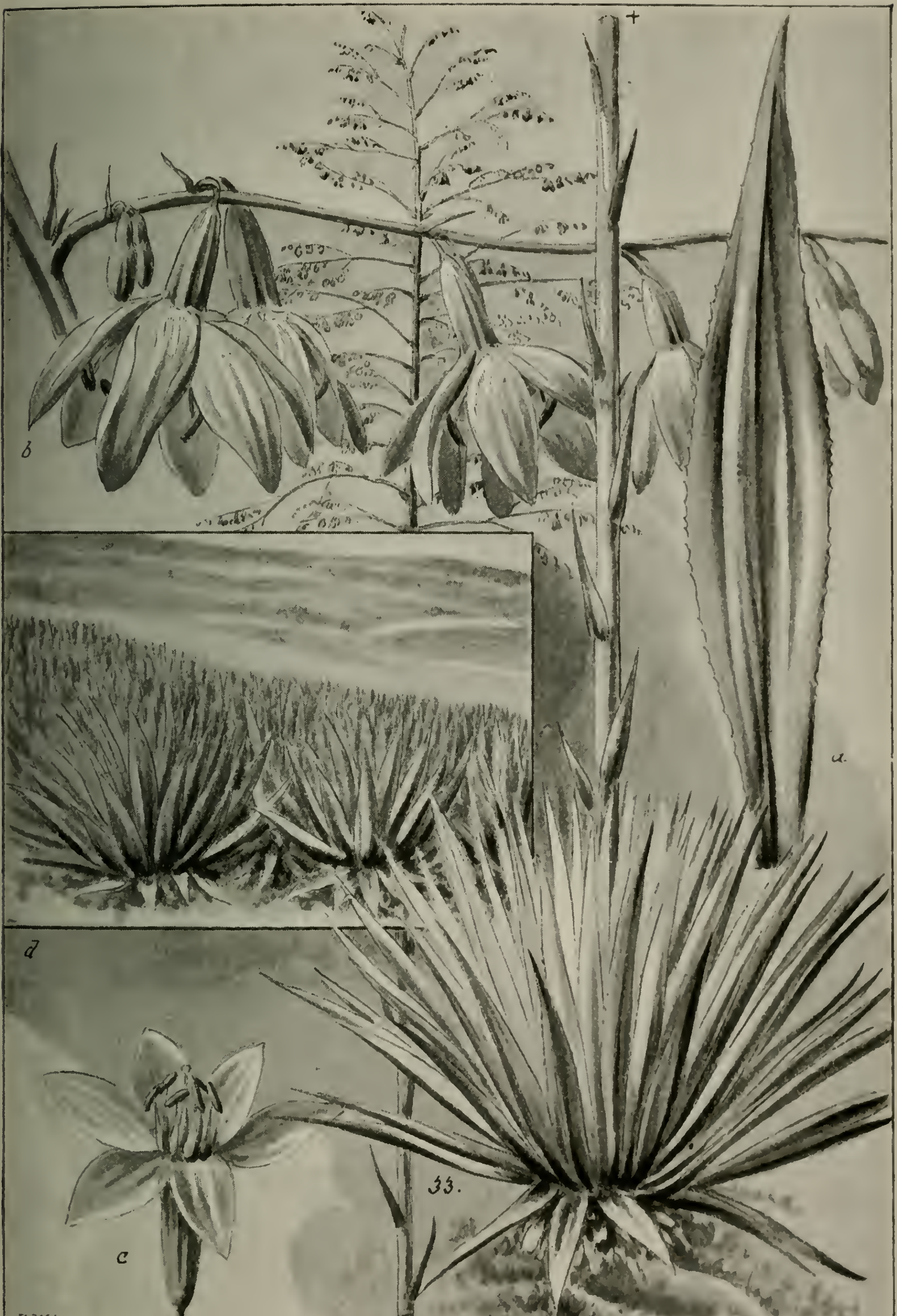

Plate XXI.

Fig. 33.—Furcræa gigantea. *(a)* Leaf. *(b)* Flowering branch. *(c)* Flower. *(d)* View of plantation.

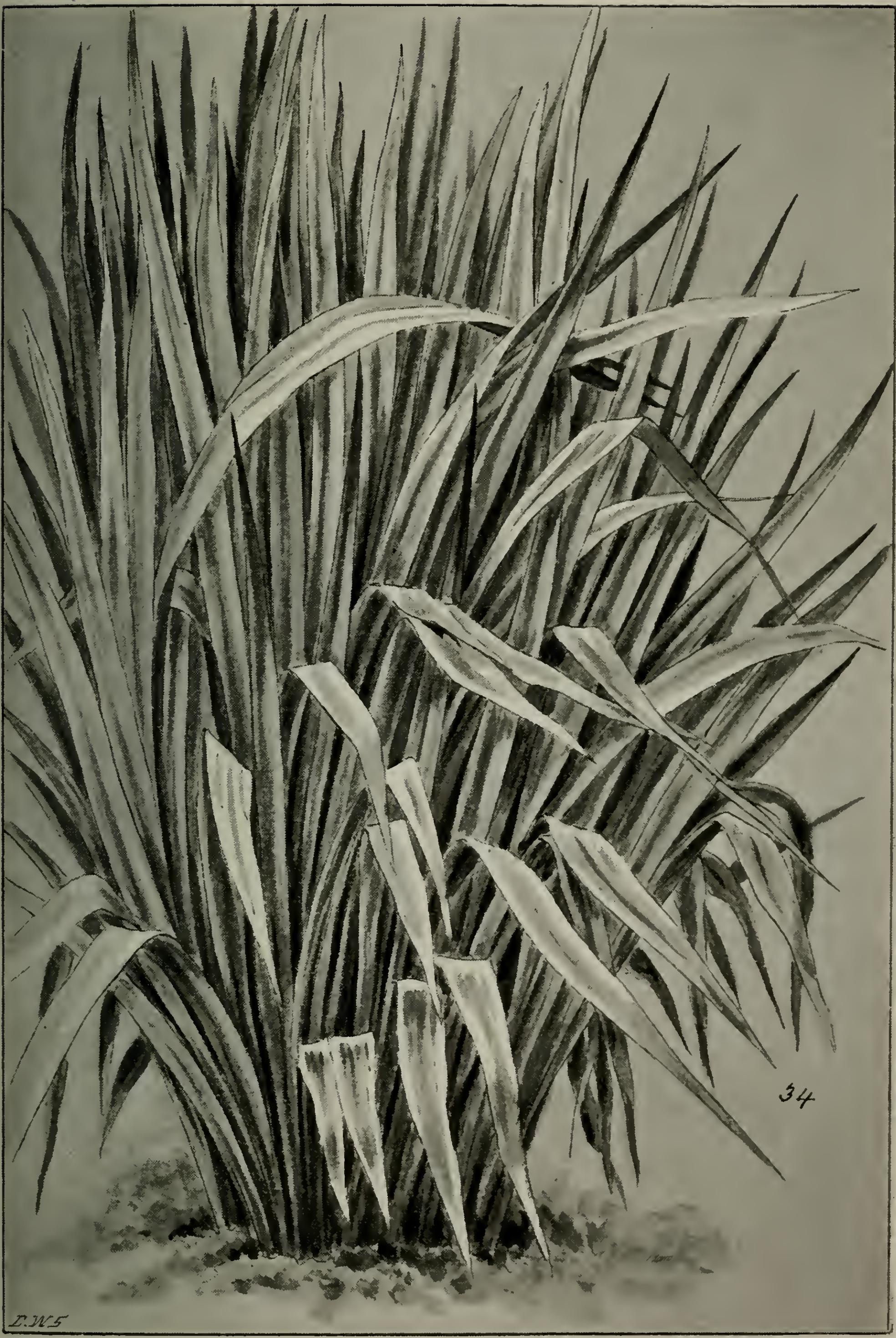

Plate XXII.

Fig. 34.—Phormium tenax, clump of.

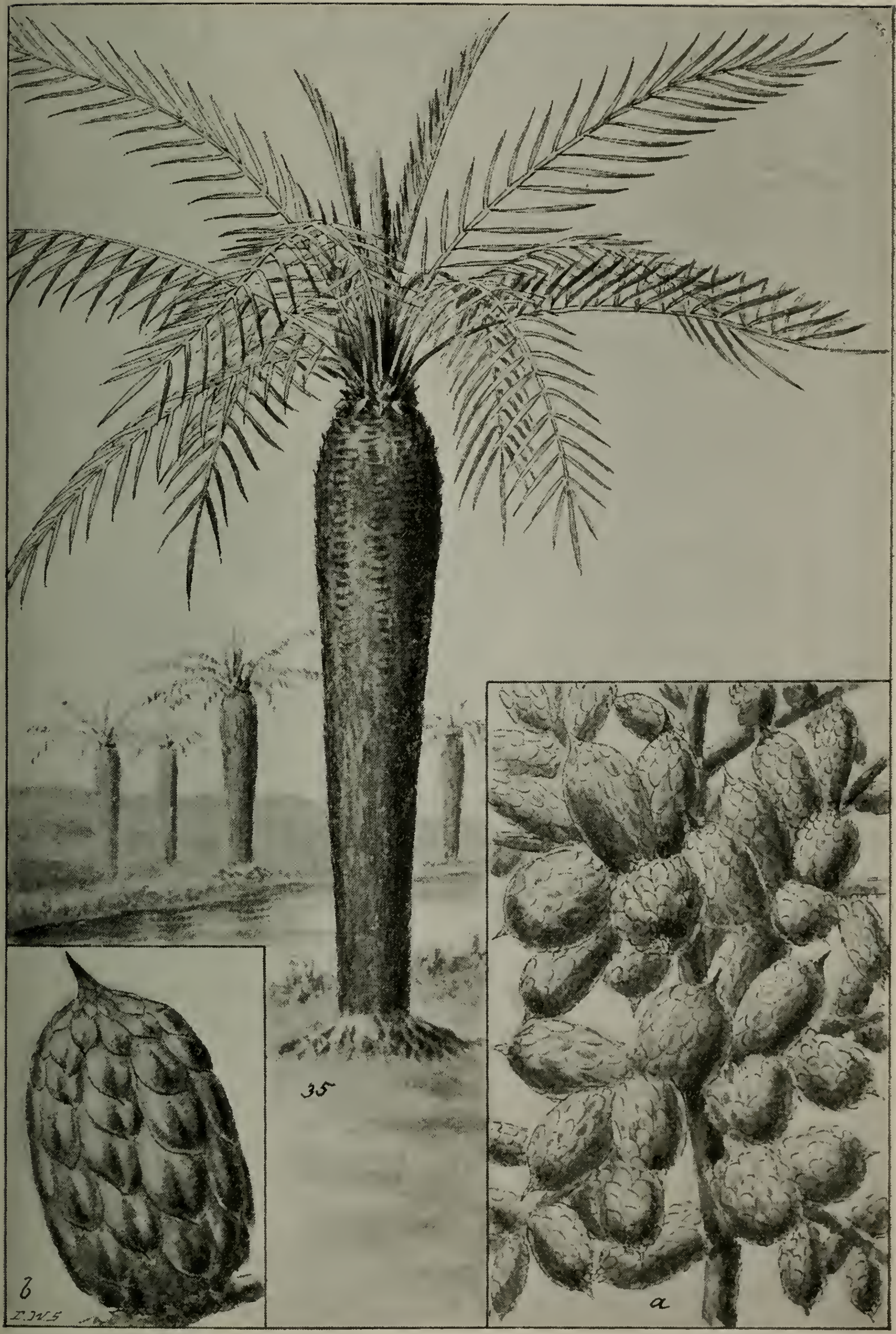

Plate XXIII.

Fig. 35.—Raphia vinifera. (*a*) Cluster of Fruit.
(*b*) Fruit.

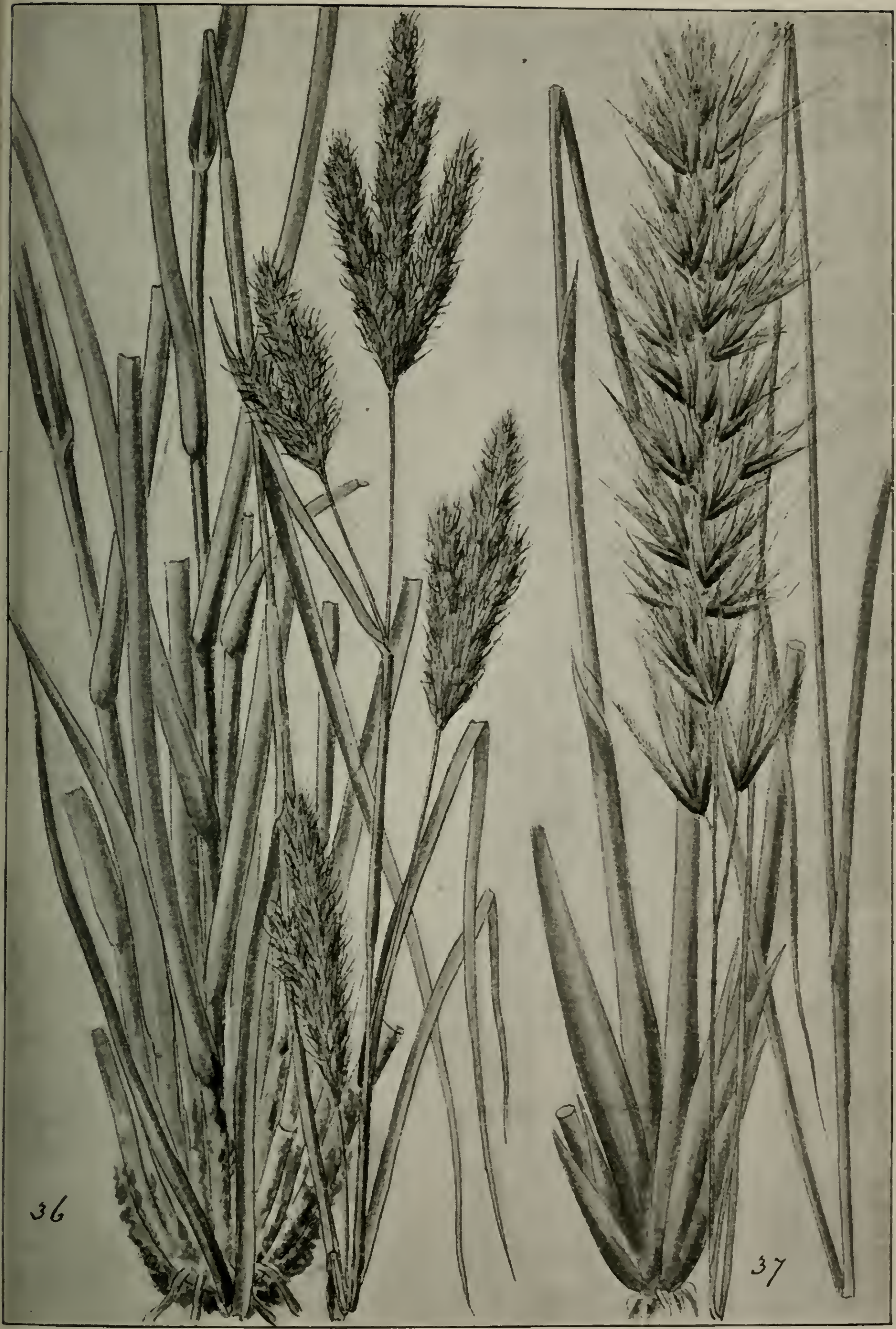

Plate XXIV.

Fig. 36.—Ischæmum angustifolium. Fig. 37.—Stipa tenacissima.

require two years before being fit for cutting, but if cut close to the ground it grows again rapidly, yielding a second crop within twelve months. Little or nothing has been added to the knowledge of this bast fibre since Royle wrote about it in his "Fibrous Plants of India," in 1855. So far as the floss or silk cotton of the seeds is concerned it is much valued by the natives of India for stuffing pillows, and in the West Indies, where it is known as French Cotton, it is much used for making fans. The following extract from the report by Messrs. Cross, Bevan, and King will show what interest has been taken from time to time in this floss, but the anticipation of its future has not, so far as I am aware, been in any way realised:—

> During the Colonial and Indian Exhibition (1886), a cotton spinner from Lancashire explained that he had now been able to utilise this fibre by mechanically drawing it in with cotton in the preparation of yarn. The difficulty he now experienced was in procuring a uniform supply. It was agreed that the best plan to secure this necessary condition towards the establishment of a new industry was to induce the people of India to attempt its cultivation. It was presumed, moreover, that by selection of seed and cultivation the quality of the fibre might be greatly improved. With this object in view, a gentleman in India was induced to attempt the cultivation, and already the spinner reports his entire satisfaction in the results of the experiment. It may thus be confidently hoped that in a few years Madar fibre (of which so much has been written during the past fifty years) may at last be viewed as an established new industry that will greatly benefit the poor cultivators of a large tract of the less productive portions of India.

Samples of the bast fibre, of the raw floss, and some native cloth made from the floss are shown in the Kew Museum. (Fig. 19.)

Marsdenia tenacissima, a climbing asclepiadaceous plant of Northern India, Assam, and Burma, particularly in dry, barren localities climbing amongst bushes and low trees. The fibre from the stems was first brought to notice by Dr. Roxburgh, and again by Dr. Royle, who paid so much attention to Indian fibres, but for fifty years after this nothing was heard of it out of India until it was again brought to notice at the Colonial and Indian Exhibition in 1886. It is known as Rajmahal Hemp, and is one of the strongest, finest, and most silky of all the Indian fibres. The natives use it for bowstrings. It is stated to rank next to Rhea or Ramie in point of fineness and durability. It is easy of cultivation, and if provision could be made for its climbing habit, or the plant could be induced to trail over the ground, it would probably, if persevered in, become a source of much profit. The natives prepare the fibre by simply cutting the stems in pieces and splitting and drying them, after which they are steeped in water for about an hour, and then scraped with a stick or even with the bare nails. In some districts the stems are not wetted at all, but the fibre is cleaned simply by the dry process. To test the strength of

Marsdenia fibre in comparison with hemp, lines made of the respective fibres broke, the first with a weight of 248lbs. when dry and 343lbs. when wet, while hemp gave way at 158lbs. dry and 190lbs. wet. Dr. Watt says one of the chief features of the fibre is its great elasticity. Whether the plant is capable of extended cultivation is a point yet to be settled. The fibre, however, is of so much value that earnest experiments, both in the cultivation of the plant and in the preparation of the fibre, should be undertaken. (Fig. 18.)

Broussonctia papyrifera. This is a small tree, known as the Paper Mulberry, and is found widely distributed throughout Eastern Asia and Polynesia. It belongs to the section *Moreæ* of the natural order *Urticaceæ,* and is closely allied to the common mulberry. The principal use to which the bark of this tree is put is for making the well-known Tapa cloth of the Polynesian Islands, and a large portion of the strongest Japanese paper is also made from it. Dr. Watt, writing on this fibre, says :—

> Perhaps no fibrous plant deserves to be more carefully investigated than this. Much time has apparently been wasted with experiments upon Bamboo and Rhea. It is probable that in both cases the experiments would have been much more profitable had they been directed to this fibre, with the view of discovering how far the paper mulberry could economically be cultivated both as a paper supply and as a new textile fibre.

That the bark is capable of being reduced to fine filamentous strips may be gathered from the fact that the Japanese use it in the weaving of a textile in conjunction with silk, and a strong fabric almost like corduroy is made by them from its fibres ; besides this a very strong twine or cord is made by twisting the fibre and coating it with a gluten prepared from wheat. This cord is used by Japanese ladies for tying their hair, but it is so strong that it might be found a good substitute for catgut. Samples of all these are in the Kew Museum. It is, however, as a paper material that it is best known, and for this purpose might become very largely used. (Fig. 20.)

Bœhmeria nivea, a shrubby nettle, indigenous to India, and probably to China, Japan, and the Indian Archipelago. This plant yields the well-known Rhea fibre, Ramie or China Grass, about which so much has been written that it is unnecessary to repeat it here. Some facts, however, in connection with it may be of interest, especially those relating to the history of its introduction and its ups and downs, especially during the latter half of the present century. This fibre seems to have made its first appearance in this country about the year 1849 in the form of some finely-woven handkerchiefs. From this time the fibre began to attract much attention, and a patent was obtained in the above-mentioned year in connection with its preparation. At the Great Exhibition in

1851 three prize medals were awarded for China Grass fibre, and this proved that, properly cleaned and prepared, fabrics could be made equal to the finest French cambric. The interest in the fibre, however, waned, and little or nothing was heard of it till, in 1865, a fresh impetus was given to it by the American Vice-Consul at Bradford suggesting to his Government the advisability of introducing and furthering the cultivation of the plant in America for the purpose of applying the fibre as a textile material in that country as well as exporting it to Great Britain, notwithstanding that in previous years living plants had been sent from Kew to all the British Colonies possessing a climate suitable for its growth, a fact unknown at the time to the American Consul. The substance of this American official communication was transmitted to the British Government, with the result that plants were again sent from Kew to the principal Colonial Botanical Gardens. Nothing much came of this fresh spurt until, in 1869, the Indian Government offered two prizes of £5,000 and £2,000 for a machine suitable for cleaning the fibre and preparing it in such a condition that it might be placed on the markets of Europe. The only competitor was a Mr. Greig, and his machine did not fulfil the necessary conditions, and the subject again fell into abeyance. Since then engineers and fibre merchants have from time to time interested themselves in the matter, and for the purpose of supplying material in the green state for experimental trials of the various machines the plant itself has been introduced and grown in the South of France and Algeria. At the Paris Exhibition of 1887 a number of machines were shown and practically tested as to their capabilities of solving one of the most interesting difficulties in connection with the fibre trade. In 1891 another trial of machines was held in Paris, the results of which made no practical advance on the previous trials. The extended cultivation of the plant presents no difficulty. With a suitable soil and the necessary conditions of heat and moisture there is no doubt that the plant could be satisfactorily cultivated in most of our tropical possessions. Regarding the question of the decortication of the stems, this problem remains still unsolved, though there are several machines and processes still under experiment. That these experiments are justified will be readily conceded by all those who are acquainted with the excellent quality and silky character of the fibre, and of the fabrics which have been made from it, not only in the native looms of India, but also in those of France and England, and it is much to be hoped that all the difficulties that have hitherto beset its general application will be speedily overcome, and the fibre find a place in our markets as a regular article of commerce. (Fig. 22.)

Girardinia heterophylla, Nilgherry Nettle. A tall, stout, erect, tufted plant, growing from 4ft. to 6ft. high, exceedingly common throughout the forests of the hill districts of India and Burma, and also in Ceylon. It belongs to the natural order *Urticaceæ*, and is a close ally to the common stinging nettle (*Urtica dioica*). In the localities where it abounds it is extensively used for making twine and ropes. It is very fine, white, silky, and very strong. The plant is in perfection in August and September, when it can be obtained in any quantity, growing from 5ft. to 7ft. high. After cutting, the stalks are stripped of the leaves, dried in the sun, boiled for twenty-four hours with wood ashes, and well washed in water. The fibre being thus removed it is dried in the sun, and is ready for spinning or making into cords. A carefully-prepared sample of this fibre, about 4ft. long and extremely glossy and silk-like, is shown in the Kew Museum. It is much to be regretted that a fibre of such excellent quality is still unknown in the market. (Fig. 21.) Dr. Watt says :—

> There is no doubt that this fibre is the strongest and in many ways the most valuable of any produced in India. A very serious practical difficulty, however, exists against its extended use in the stinging hairs with which the plant is abundantly furnished. These cause great annoyance to the persons employed in extracting the fibre, and even after being manufactured into cloth the irritant property may not be completely destroyed ; indeed, in many cases it persists to such an extent as to cause great irritation to the person wearing or even touching the cloth.

These, of course, are serious drawbacks, but it is probable that they are not insurmountable.

Debregeasia hypoleuca. This is a large urticaceous shrub of the Western temperate Himalayas, Afghanistan, and Abyssinia. The plant grows about 8ft. to 9ft. high, and the stalks are about as thick as the finger. To prepare the fibre the stalks are either soaked in water, like flax, or it is prepared dry. The fibre is much valued for nets, as it does not rot in water. On account of its strength it is said to be much used in some parts of India for making bowstrings.

Villebrunea integrifolia, the Ban or Bon Rhea of Assam, is another of the nettles the fibre of which is said to be stronger than China Grass or Rhea. In North-East India the native tribes use the fibre for fishing nets and lines on account of its strength and power of resisting moisture. It has been recently stated that the Government of India has been recommended to promote the cultivation of this plant and investigate its merits.

Pinus palustris. It will probably appear strange to many of our readers that a coniferous plant, more especially a species of pine, should be included amongst fibrous plants, for the barks of the pines are remarkably free as a rule from any fibre, with perhaps one notable exception, namely, that of *Thuja gigantea*, a tall-growing tree of British Columbia, where the natives collect the bark, beat it, and comb it out into a fine brown fibre, from which they make mats and articles of clothing, but they are of a very coarse description. The best coniferous fibre is undoubtedly that obtained from the leaves of the pitch, yellow, or long-leaved pine, a tree growing to a height of from 60ft. to 70ft. in the sandy wastes called pine barrens, extending from Norfolk, Virginia, southward for 600 miles through Carolina, Georgia, and Florida, and in width from the coast of 100 miles, thus forming vast forests. The principal use of this pine has hitherto been, and is probably still, the production of turpentine, for it is the chief source of the turpentine of commerce ; but about ten years ago it was discovered that the very long needle-like leaves contained a fibre that if properly prepared could be turned to a very profitable account. The Americans were not long in developing this new material, and very soon a company was formed to extract the fibre, clean it, spin it into yarns, and convert it into carpets and mats. The leaves in their dried state are commercially known in America as pine straw, and, as may be supposed, from the enormous number of trees that cover so vast an area there is any amount of material to be had—in fact, it is a waste product. The green straw or leaves gathered from the surrounding forests is brought to the mills and spread upon the floor to be cleaned. It is next placed in iron cylinders surrounded by steam pipes and thoroughly steamed, the vapour passing through pipes into an ordinary distillery worm, where it is condensed, the result being pine leaf oil, which is yielded in the proportion of a half gallon of oil to one ton of leaves. This oil is a valuable product in medicine. After the oil has been extracted the pine straw is placed in large iron vats, where it is mixed with water and alkali and thoroughly boiled, which process is necessary to remove the silica which forms the outside covering of the leaf. The last boiling process is continued for twelve hours, after which the straw is soaked for forty-eight hours more, and it is then ready for the machinery, from which it comes after a complicated system in the state of a pure fibre of a rich dark brown colour and a soft texture. It is next dried, carded, and submitted to a system of evaporation to thoroughly dry it, when it is packed in bales and is ready for the market. It is next dyed or bleached or used in its natural brown colour and woven into carpets or mats, and it is also used for surgical dressings. For carpets or mats the fibre is extremely strong and durable, more so even than cocoa-nut fibre, while at the same time it is softer and more pleasant to walk upon. It is said that these fabrics are much used in America, but so far as I am aware they are unknown in English commerce, though from my own experience I can testify to their durability. Samples both of the fibre and mats are shown in the Kew Museum. (Fig. 23.)

MONOCOTYLEDONOUS OR ENDOGENOUS FIBRES.

Musa sapientum. The banana and plantain have long been known as furnishing from their fleshy green trunks a quantity of valuable fibre, which is much used where the plants are abundant for ropes, cordage, mat-making, and various similar purposes. Both the banana and plantain are so closely allied that by some authorities they have been considered as one species; it is, however, generally acknowledged at the present time that the plantain is a form of the banana, and while the latter is referred to *Musa sapientum* the former is called *M. sapientum* var. *paradisiaca.* Both plants are extensively grown in both the East and West Indies, as well as in other tropical countries, and the fibre, though easily prepared, does not fetch a high market value in consequence of the numerous competitors it has in fibres of a similar character but stronger and softer. Dr. Morris has, however, drawn attention to the question whether the immense number of banana stems cut down annually in the West Indies—estimated at 50,000,000—could not be utilised for their fibre; if not for rope-making, it might form a good material for packing paper or for *papier maché.* (Fig. 24.) By far the most important species as a fibre producer is *Musa textilis*, the Manilla Hemp, a native plant of the Philippine Islands, where it is cultivated under several varieties, exclusively for the sake of the fibre. It grows to a height of from 12ft. to 20ft., and has a similar habit to the common plantain. It is propagated by means of suckers thrown out at the base of the stem. The first cost of establishing a plantation ranges from £5 to £8 per acre exclusive of the cost of the land. After this the cost of maintaining the plantation in good condition varies from 30s. to 35s. per acre. The first crop is taken eighteen months or two years after planting, and in the third and fourth years the yield is at the rate of from 400lbs. to 700lbs. of dry fibre per acre. All the fibre is cleaned by hand, as no machine as yet introduced can do the work so efficiently and so cheap. A skilful labourer will clean 20lbs. of fibre per day. Referring to this manufacture Dr. Morris says:—

> The Manilla hemp industry in the Philippines is fostered by very exceptional circumstances. The plant is native of the country. It is cultivated on virgin soil, of which in that part of the world there is a considerable extent, and in addition the labour supply is cheap and abundant. It is important to bear these facts in mind in starting the cultivation of any fibre that is likely to come into competition with Manilla hemp. Even in the Philippines there are districts in the Western and Northern parts with a drier climate where the plants will not grow. Hence it is useless to attempt to establish a Manilla hemp industry in any country where the soil is not rich and where there is not an abundant rainfall well distributed throughout the year.

Manilla hemp ranks as the best of white cordage fibres. The annual exports of this fibre from the Philippine Islands amount to about 50,000 tons, of the estimated value of £2,500,000 sterling. In its native country it is prepared into fibres of such extreme fineness that it is woven into some of the most delicate fabrics like very fine muslin, and also into lace. (Fig. 25.)

Bromelia argentina. The fibre obtained from this plant has been known by the name of Caraguatá, and in the Paraguay Court of the Paris Exhibition of 1889 some very good specimens were shown, but the plant producing it was not known till 1890, when specimens were received at Kew, and upon being proved to be a new species of *Bromelia* it received the name of *Bromelia argentina.* The fibre is long, and when properly prepared is very silky. The difficulty with this fibre, as with many others, seems to be the want of suitable machinery for cleaning it, and when this difficulty has been overcome it is expected that Caraguatá fibre will form an important article of export from Paraguay. (Fig. 26.) Several other species of *Bromelia*, as *B. sylvestris*, of the West Indies and Central America, and *B. Pinguin*, of Jamaica, furnish fibres of excellent quality, and might be found very useful if proper attention were given to them.

Ananas sativus, the Pine Apple. This, like the last, belongs to the natural order *Bromeliaceæ*, and is well known for the sake of its delicious fruit. It is a native of tropical America, but has become quite naturalised in tropical countries generally. The fibre is one of very excellent quality, being fine, silky, and remarkably strong. In a wild or semi-wild state the plants are more highly developed than in plants cultivated for the fruit, and consequently are of greater value. In the Philippine Islands it is said that the fruits are often gathered before they ripen, so as to cause a greater development of the leaves. The pine apple is of easy cultivation and propagation, the latter being effected by offsets from the base. In twelve to eighteen months the leaves are fully grown, and from ten to twenty leaves can be produced each year. The fibre is extracted by scraping away the fleshy matter, then washing the fibres and bleaching them in the sun. In 1893 it was stated in the "Kew Bulletin" that one manufacturer had such a high opinion of the value of pine apple fibre that he anticipated being able to use 1,000 tons a year or even more at the price of £30 per ton delivered in London. As an illustration of the great length to which this fibre can be extracted, it may be mentioned that a sample in the Kew Museum from Malacca measures 6ft. That it is capable of being manipulated into remarkably fine fabrics is shown also by some specimens in the same collection at Kew. (Fig. 27.)

Sanserieria cylindrica. This is an African species of the genus *Sanserieria*, several of which are well known as fibre-yielding plants under the general name of Bowstring Hemps. The species under consideration has a geographical range extending across South Africa from Zanzibar to Angola. The plant is very distinct from the allied species, inasmuch as its leaves are 3ft. to 4ft. long, and quite cylindical or rope-like, and about 1in. in diameter at the base, decreasing slightly towards the apex. It is known in Angola as Ife. The fibre is so strong that it is said to be the best fitted for deep-sea sounding of any fibre known. Samples of fibre prepared by Death's fibre machine from plants grown at Kew were valued in 1887 at £28 per ton. Several samples are shown in the Museum at Kew. (Fig. 28.)

Other African species are—1. *S. longiflora*, a native of Equatorial Africa, with leaves similar to those of the last-named species, but sometimes with green blotches. The fibre from this plant has been valued at £30 per ton. 2. *S. Kirkii*, which grows abundantly near Pangane, on the African mainland opposite Zanzibar Island. The robust habit of the plant is said to be a strong recommendation for its culture as a fibre plant; £27 per ton is the valuation of a sample from plants grown at Kew in 1887. 3. *S. Ehrenbergii.* This plant grows abundantly in Somaliland, on the African coast, opposite Aden. It has stout, solid, rigid, and almost cylindrical leaves, some of which have been measured over 7ft. in length. It was first brought to the notice of the Kew authorities as a fibre plant in 1892, and the fibre was valued in London at £25 per ton. The native mode of preparing the fibre is by pulling the leaves and cutting the sharp points off. The leaf is then divided down the middle and beaten until quite soft. Each strip is then drawn between two pieces of wood fastened tightly together, by which means the pulp and watery matter is squeezed out, and when the fibre is quite dry it is ready for shipment. It is stated that the fibre must be extracted immediately after the leaf is pulled before it gets dry or the fibre is spoiled. In consequence of the dry, arid condition of the country in which this plant grows it might be found suitable for cultivation on soils naturally too dry for other cultures.

S. Zeylanica. This species is a native of Ceylon, where it has long been cultivated for the sake of its fibre, which is in general use by the Cingalese for making cordage ropes, mats, cloth, &c. Some of the best and most beautiful of the Ceylon sleeping mats are made of this fibre, which is dyed of various colours and worked into patterns. The plant is known under the name of Neyanda in Ceylon. The leaves are from 1ft. to 2ft. long, rounded on the back, and concave or channelled on the face, and about $\frac{1}{2}$in. thick.

The usual mode of preparing the fibre by the natives of Ceylon and India, where the plant also grows, is either by retting or by simply beating the leaves and washing out the fibre.

> Full-grown leaves yield at the rate of 7·87 per cent by weight of the green leaves. Owing to the smallness of the individual leaves they are difficult to clean by machinery, but if it were possible to separate the fibre by a chemical process the plant would probably become of great commercial value.

Samples of this fibre have been valued in London at from £20 to £35 per ton. (Fig. 29.)

All the species of *Sansevieria* are well worth careful attention as fibre producers. None of the fibres, so far as I am aware, are yet known in commerce. The plants are very easily propagated either by division of the rhizomes or underground stems, or by cutting up the leaves in pieces a few inches long and planting them in moist situations, where they readily take root. Besides this the plants can be raised from seed in the ordinary way. In three or four years they will be sufficiently grown to yield a crop of fibre-producing leaves.

Agave rigida. Probably no fibrous plant has attracted so much attention as have the varieties of *Agave rigida*, and more especially that variety known as *sisalana*, which is the source of the now well-known Sisal hemp, Henequen or Yucatan hemp, for it is in Yucatan that the greatest area of land is covered by these plants, an area estimated at 224,000 acres. Referring to the introduction of the plant into the Bahamas, where it is now grown on an enormous scale, Dr. Morris says :—

> Considerable interest has attached to the agency whereby the Bahamas became possessed of this valuable plant. The same plant is largely found in the South of Florida. This, we know, was brought there by Dr. Perrine from Yucatan in 1836 and 1837. His intention was to cultivate it on a huge scale for fibre purposes. About the same time he introduced thirty-six families from the Bahamas to settle on the land and supply the necessary labour. The Bahamas people were, however, frightened away by Indians, and could not be induced to return. Dr. Perrine himself soon after lost his life, and his plantations were abandoned. The fibre plants, however, were destined to survive. They were carried about and planted as curiosities in gardens, and used as hedge plants. Some found their way to Key West and to the neighbouring islands, and no doubt many were taken either by the settlers or by some other means to the Bahamas, as well as to Cuba and the Turks Islands. They are now present in all these islands.

But in the Bahamas the cultivation has spread most rapidly, and the plants grown there are of the variety producing the best fibre; indeed, the Bahamas fibre is ranked as superior to all other rope fibres with the exception of Manilla hemp. (Fig. 30.)

Amongst other species of *Agave* yielding fibres are: 1. *A. vivipara*, furnishing Bombay Aloe and Manilla Aloe fibre. It is a native of tropical Africa, but is widely spread in the East, being used as a hedge plant in India. The fibre has been valued in the London market at prices varying from £5 to £12, and up to £25 to £30 per ton, according to the manner of cleaning and preparation. That coming from Manilla is usually of a better quality than the Indian. 2. *Agava heteracantha.* This is known as the Istle or Mexican fibre, and an important industry in it is carried on at San Luis Potosi. It is entirely obtained from wild plants. The fibre is coarse and stiff, and is used chiefly in the manufacture of cheap nail brushes and scrubbing brushes. It is prepared by hand by a system of scraping the leaf with a knife on a wooden block, after which it is spread out in the sun to dry, and finally made up into bales for export. The industry is said to be at present in its infancy, but if intelligently followed it might become a very prosperous enterprise, especially by the introduction of economical machinery and properly managed plantations. (Fig. 32.) 3. *Agave americana.* This is the common American Aloe, so often seen in this country in collections of succulent plants. The fibre is one of the least important of the species of *Agave,* having but little strength. It is, however, sometimes used for brush-making. (Fig. 31.)

Furcræa gigantea. This is a plant closely allied to the *Agaves,* the fibre of which is known by the name of Mauritius Hemp. It is a native of South America, and was introduced to the Mauritius about a hundred years ago. In the early part of the present century it had become well established in many parts of the island, especially on old sugar plantations, so that the prospect of utilising the fibre began to be considered about 1870, with the result that at the present time the value of the exports is estimated at about £30,000 annually. In recent years the plant has been successfully introduced into the island of Anguilla, one of the Leeward group. It is readily increased by planting the small bulbils which are formed by the old plants; they exist for a period of from seven to ten years, when they produce their flower spike and die. Too frequent cropping of the leaves causes the plant to produce its flower spike prematurely, which is, of course, followed by early death. The fibre is valued on account of its fineness and lustre, and is consequently used chiefly for ornamental purposes rather than for rope and cordage making. (Fig. 33.)

Phormium tenax. This plant belongs to the *Liliaceæ* or lily family. It is a native of New Zealand, and is often seen in gardens in this country, as it grows well in sheltered positions, especially in the South of England. It is, however, an uncertain plant, severe frosts often doing it much injury, and even killing it outright. It does much better as a greenhouse plant, and both the plain and variegated forms are frequently seen cultivated for the sake of their foliage. The average length of the leaves is from five to seven feet, though they are known to grow to a length of ten feet. The plants are so abundant in New Zealand that cultivation for the sake of the fibre is not necessary. It has been recommended, however, to start plantations under favourable conditions and make the plant one of the established crops of the country. Under such conditions it is anticipated that the leaves would be more uniform in growth and the fibre of a better quality. That some such system is necessary, if the fibre is ever to come generally into English commerce, is proved by the fact that the Maoris in the early days of its application in its own country were careful to select only those leaves in which the fibre was properly ripened and of good quality, and consequently the leaves were cut only at certain seasons. The hand-dressed fibre is suitable for spinning into various fabrics, such as damasks, while the machine-dressed fibre is said to be applicable only for ropes and cordage. Maori hand-dressed fibre was, in the early part of the present century, sent from New Zealand in large quantities to Sydney, and in the English markets it realised a good price under the name of New Zealand Flax. The machine-dressed fibre seems not to have come into commerce till 1861. A good deal of attention has been given to this valuable fibre both in New Zealand and in this country, but there is still something to be done to make it a remunerative commercial article, and this something ought to be quite within the range of practical development when it is seen from the collection of products in the Kew Museum that its capabilities as a textile are very promising, and it must always be borne in mind that a textile fibre has many more chances before it than one suitable only for cordage, brush, or paper making. (Fig. 34.)

Raphia vinifera. This is essentially a brush fibre, and is the produce of a West African palm, being known in commerce as West African Bass. The plant is sometimes known as the Bamboo Palm, or Wine Palm, and forms a very large proportion of the forest vegetation over an area of 5,000 square miles in Lagos. The fibre is contained in the lower part of the petioles or leaf stalks, and is readily extracted by simply soaking in water and scraping out the fibrous portion, a work requiring no skill, and which the natives are quite capable of performing. This fibre was only introduced to commerce in 1890, and since then it has come into this country in very large quantities, so that its price has considerably decreased, besides which it has other rivals of recent introduction to contend with; nevertheless, there is always a demand for stiff brush fibres of the bass or piassava class, and though the Para and Bahia fibres will, in consequence of their superiority and the hold they already have on the market, always, no doubt, maintain their position, the uses of such fibres must continue to increase as the population increases and civilisation extends over the face of the globe. Two other instances of new sources of a similar material may be mentioned, first in the Madagascar piassava, a long, fine brown fibre of superior quality, the produce of a new species of palm which only received its scientific name of *Dictyosperma fibrosum* at Kew in 1894. As a proof of the good quality of this fibre it may be stated that it has been valued in London at £46 per ton. Another fibre similar to that from West Africa is obtained from the bases of the leaf stalks of the Palmyra Palm (*Borassus flabellifer)*, which is found abundantly in India and Ceylon, and also in tropical Africa. This first appeared in commerce in 1891, and has realised prices in a dull or overstocked market from £26 to £34 per ton. Notwithstanding that these fibres are comparatively new to commerce and, together with kittool, an excellent soft black fibre from *Caryota urens*, the Wine Palm of India, are now regularly on the market, there are no doubt plenty of palms in the East as well as in Brazil from which similar and perhaps even superior fibres may yet be obtained. (Fig. 35.)

Stipa tenacissima. This is the well-known Esparto Grass, and is introduced here as an example of a material that has taken a most important and prominent position as a paper material. It grows abundantly over extensive tracts in North Africa, as well as in some parts of Southern Spain, and forms large and thick clumps, sometimes as much as 2½ft. high in sandy and rocky soils. It is estimated that in Algiers there are 2,500,000 acres of land covered with esparto in its wild state, but the constant drain upon the plant is causing it to diminish, and the necessity of finding an efficient substitute is apparent when we point out that in 1861 only 891 tons were imported here, which had increased in 1888 to over 248,000 tons. The use of wood pulp and other inferior paper materials, together with the cause as stated above, have diminished the imports of esparto so that in 1894 they amounted to only 184,910 tons. (Fig. 37.)

Ischæmum angustifolium. This is one of the best substitutes for esparto that has yet been introduced. It is common in many parts of India, and is known as the Bhabur Grass, Bhaib, or Bankas. Since 1878, when trials were made in this country with the grass as a paper material, it has become very largely used in India. It yields two crops in a year, one in September and the other at the end of October or the beginning of November, and this without any irrigation, as the rainy season is then prevalent. It is supposed with irrigation it might be induced to yield a third cutting. It might be necessary to cultivate the plant were there a very large demand for it out of India, and in this case the quality might be generally improved. For planting it is recommended that a dry situation should be selected where no water lodges, as it has been proved that if there is standing water the roots rot. A sloping site is considered the best. After planting by small portions of root it will yield a very trifling return for the first two years, but by the third or fourth year, when the roots have spread and multiplied, it gives a good crop. Dr. King, of the Calcutta Botanic Garden, says at the present time Bhabur grass furnishes "the chief raw material for paper-making in the neighbourhood of Calcutta and other parts of India." (Fig. 36.)

In conclusion, it must be stated that the plants enumerated in the foregoing pages are only a comparatively few to which attention might have been drawn, but they have been selected as types of what are really required in the fibre market of the world, first as textiles, next for rope and cordage making, then as brush fibres, and finally for paper-making; but there are other uses which are continually cropping up—such, for instance, as that of providing new materials for the manufacture of ladies' hats, braids, &c. Some of what might be generally considered as very unlikely substances are frequently adapted to these purposes; for instance, quite recently the old Cuba bast, the inner bark of the West Indian *Hibiscus elatus*, which thirty or forty years ago was used for tying up plants in gardens as well as securing bundles of cigars, but which has long fallen out of use, has again found favour, after bleaching or dyeing, for plaiting into the most fanciful designs for bonnets and hats. Again, the coarse brown fibrous bark of the Baobab *(Adansonia digitata)*, which was at one time recommended as a paper material, has within the last year or two been applied to similar purposes. Even individual fibres like those of Manilla Hemp and Sisal Hemp are laid parallel and their edges brought together and fixed by gelatine and so made into ribbon-like bands, which, after being passed through rollers with heavy pressure, have a remarkably fine gloss on the surface. When dyed in various æsthetic tints these fibres form a beautiful material, and are among the choicest that have been introduced for plaiting as a substitute for straw, or rather as an improvement on that better known material. There is an increasing demand for such substances as these, and this is but one adaptation of new and little-known fibres that only require bringing to light to develop them into valuable commercial commodities. Specimens of nearly all the fibres referred to in this article are contained in the Museum of the Royal Gardens, Kew, together, in most cases, with manufactured articles made from them.

Indian Taxation—Ancient and Modern.

BY HOLT S. HALLETT.

RECENT events have given us ample proof of the need of carefully considering our position among nations. Isolated as we are, and beset by jealous rivals hostile to free trade, who envy us our world-wide empire and would fain wreck it in order to acquire some of its valuable fragments, any day a combination of nations may be arrayed against us threatening the destruction of our maritime supremacy, the closure of great markets to our trade, and havoc if not ruin to our empire. We have been thus forced to the conclusion that it is our imperative duty to prepare for all eventualities by strengthening our naval and military armaments, completing our system of fortifications, and organising our imperial resources of attack and defence. To do this effectively each portion of our dominions should be prepared, according to its taxable capacity and population, to provide its due share of money and men.

The article which I have been asked to contribute to this Annual treats with the taxation of a country containing over three hundred million inhabitants—one-fifth of the population of the world—of whom two hundred and thirty-two millions are our fellow-subjects, forming four-fifths of the gross population of our Empire. The remaining sixty-nine millions are inhabitants of native States under our control and protection. The subject is of interest to us both in regard to India's strength as part of our Empire and in respect to the financial statements of successive Liberal and Conservative Secretaries of State for India in the House of Commons, which have directly implied that for further increase to her revenues India must look to the increase of her import duties. In his speech in the House on the Indian Budget, on August 13th, Lord George Hamilton referred to the difficulty of providing for fluctuations in the exchange value of the rupee, and said :—

> In these circumstances we have to ask ourselves what taxable resources we have that are not now in operation. Of direct taxes there are absolutely none. The income tax is small and cannot be raised, and it is impossible to raise the succession duty. Besides that, these taxes are specially adapted to meet the difficulties and emergencies with which we have occasionally to contend. The only indirect taxation which is in our hands consists of the salt and Customs duties. The salt duty cannot be put higher, because it is higher now than one could wish it to be.

Such are the official views of the present Secretary of State for India when shackled by office fetters. To learn his real views on the subject of Indian taxation and agitators, we may turn to the debate on Sir Henry James's motion on the Indian cotton duties in the House of Commons on February 21st, 1895, where we find the unshackled Lord George Hamilton remarking that:—

> He had long been connected with the administration of India, and he knew something about India. He agreed that they should listen to the voice of India, but if they wanted to hear the view of India, Bombay and Calcutta were not the places where they would hear it. Those Europeanised cities did not represent India, and the peculiarity of India was that certain sections of those two capitals, having adopted Western ideas, had developed with singular skill the methods of agitation. The result was that there was no country on the face of the world where the shrieking units of society could make themselves so well heard and where the millions were so quiescent as in India. He knew the gentlemen who got up the agitation. Let the right honourable gentleman propose an income tax, and they would very soon find out that there was much more danger in the income tax than in dealing with cotton. He knew them of old. They were always opposed to any taxation of any sort that touched themselves, and when there was any difficulty the remedy was to tax cotton or to raise the salt duty.

THE INDIAN NATIONAL CONGRESS.

The lengths to which the so-called Indian National Congress can go in their endeavour to place the burden of taxation on the shoulders of others was exemplified by the Amendment to the Address moved by their mouthpiece, Mr. Dadabhoi Naoroji, then Member for Finsbury, on February 12th, 1895. He moved that half of the expenditure incurred in the employment of Europeans in the military and civil services of the Government of India should be met by the British taxpayer and borne by our Exchequer. As a certain clique of politicians, including Lord Brassey, are given to taking the utterances of the "shrieking units of society" in India as the voice of the masses of that country, it will be well to consider their value as guides and not blindly take them at their own estimation. The nature of the Congress is thus exposed by the late eminent Anglo-Indian statesman, General Sir George Chesney, in Chapter 22 of his work on "Indian Polity," published in 1894:—

> The so-called National Congress, which comes more under notice in this country than the writings of the vernacular press, although also thoroughly disloyal, is less mischievous because of the absurd character of its proceedings. They always set out, indeed, with a profession of loyalty to the British Government, but the resolutions they embody are distinctly aimed at rendering that Government impossible. The self-elected delegates who make up that body are in great part pleaders in the Law Courts and ex-students from the Government College in want of employment, a class yearly increasing under our system of free education, the class, in fact, which works the native press, with which the Congress is in close alliance. . . . As for practical politics, the resolutions declare for a great reduction in the salt tax, a doubling of the

minimum income exempt from payment of income tax, increased public expenditure on all branches of public education, and reduction of fees in the schools and colleges. In fact, taxation is to be reduced, public expenditure is to be increased, and legislation generally is to be in the interest of the class which practically contributes no taxation whatever. This, with the proposal that the small body of English public servants should be replaced by natives, embodies the political aspirations of the members of the Congress.

The Congress appears to have attempted to remove the reproach that they only cared for their own interests by passing a resolution the following year affirming the abject poverty of the agricultural classes, and calling for remedial measures, and the mover of the resolution, Mr. Seymour Keay, who took part in the proceedings of the Congress, thought fit to assert that the masses "were slowly growing sullenly discontented owing to the steadily growing grinding poverty." If such utterances were worthy of belief, the state of India would indeed be perilous in the extreme. But such mischievous vapouring hardly needs contradiction. It is notorious that the people in British India are better off in the present day than they ever were under native rule. The standard of living is everywhere rising. Peasants in Northern India, whose fathers subsisted on the inferior grains, now live on wheaten diet; whose fathers used earthen vessels, have a plentiful stock of brass and iron pots in their homes; and whose fathers dwelt in reed and mud hovels, now inhabit fairly comfortable houses of burnt brick. Everywhere in the use of articles of European manufacture, twenty years ago unknown, the masses of to-day show that they are better off than their fathers. The admirable memorandum on the Madras Presidency during the last forty years, drawn out in 1892–93 at the instance of the Governor, Lord Cornwallis, by Dewan Bahadur Sreenavasa, has shown that, far from retrograding, the circumstances of the people of Southern India have improved immensely in every respect. The Rev. F. Foulkes, a retired army chaplain, many years resident in the Salem district of the Madras Presidency — a district as large as Wales — after close inquiries into the condition of the people in this vast district, wherein the condition of the farming class is no better than elsewhere in India, furnished the Government with a memorandum in which he stated that "the farmer and his family consumed food the market value of which is 72 rupees,* or 6 rupees a month, while the surplus income of each family—over and above the 72 rupees—is 265 rupees (in a 75 per cent crop year). In other words, the three adult members of the family have 7 rupees a month for his or her pocket-money after paying for board and lodging and all other expenses." In the same way Mr. Skrine, who inquired into the condition of the masses in the Bengal Presidency, found that the great amelioration which has taken place in Southern India extended likewise to Eastern India. As to the Central Provinces, during the thirty-eight years which have elapsed since they were constituted, the area under cultivation, the population, the trade, and the general standard of comfort has continually been increasing. According to the *Bombay Gazette*, even in jungle villages of these provinces "the inhabitants have hoarded stores of silver beyond the dream of villagers in England." Destitution, of course, exists in India as elsewhere, but, as *The Times of India* pointed out in 1893, "even in the worst district of the whole country less than 20 per cent of the people can be described as ill-fed; while taking the country as a whole there is infinitely less poverty, as poverty is understood by the Western mind, than there is in Great Britain or in any country on the Continent of Europe."

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* Writing in 1872, before the fall in the exchange value of the rupee commenced, Sir William Hunter, in his work "Orissa," noted that "Fifty thousand pounds (Rx.50,000), the annual rental of the religious lands in Orissa, represents, at least, an income of a quarter of a million in England." That is to say, with a native of India ten rupees goes as far and represents as much comfort as five pounds do to an Englishman, whose habits and style of living, under different circumstances and a more inclement climate, are utterly dissimilar.

CONDITION OF INDIA UNDER NATIVE RULE.

It is not only in creature comforts that the prosperity of the country manifests itself. What is more important than comfort is security and safety. There are still Mahomedans living in the Punjab who can remember the days of Hari Singh and his Sikhs, when the very suspicion that a man was wealthy and had property to be looted led to a charge of cow-killing being trumped up against him, and to his house being levelled to the ground, and himself and his family slaughtered. Even under the comparatively mild rule of Runjeet Sing, cattle-thieves had their arms and legs struck off. There are others who remember the Gurdi Ka Wukht, or "Period of Trouble," the twenty years of anarchy in Central India, when, according to the evidence taken on the spot at its close by Sir John Malcolm, who aided in conquering and bringing peace to the country in 1817–18, the rulers plundered, the peasantry plundered, and "there was, in fact, no other profession," and when we are told by the same authority that adultery is the crime which seemed to have increased most, from the shock society had sustained, which was to be attributed to "that violence to which their females have been exposed from a lawless soldiery, and their ceasing, in consequence, to value a virtue that could not be preserved."

The soldiery both of Hindu and Mussulman powers in India, for centuries before our rule, was largely composed of bands of free-lances from Abyssinia, Arabia, Scinde, Afghanistan, and

Makran, who came annually into the country for service, many of whose leaders, finding favour at the various Courts, rose to the command of armies and to be Governors of provinces, and, as the fruit of their rebellion, rulers of States. The greater part of India was under such rulers at the time when it came under our sway.* Many of the villages in Central India had been waste for more than thirty years. For instance, 45 per cent of the villages in Holkar's dominions, 90 per cent in the Dhar State, 86 per cent in the Dewass State, and 63 per cent in the territories of the Maharaja of Bhopal were desolate, their inhabitants having scattered in all directions. Not only did the Mahratta and Rajput chiefs harbour corps of bandits, robbers without mercy, the women being worse than the men, known as Pindarees, letting them loose to devastate the country far and wide in each others' territory and to extend their depredations into distant countries, but they kept up armies of foreign mercenaries, often ten times as numerous as the revenues of their own States could support, and allowed them to make up their arrears of pay by levying "as heavy contributions as could be extorted from the managing officers of the province or town they entered or attacked."

Assassins, known as Thugs, some of whom boasted of having been such for twenty generations, had their villages in the country, which was their principal headquarters. These Thugs attained great strength in Central India, and were not of any one tribe, but were composed of all classes—even Mahomedans were admitted; but the great majority were Hindus, and amongst these the Brahmins (Hindus of the highest caste) were in the greatest numbers and generally directed the operations of the different parties, which often consisted of 300 or 400. Besides the many robber tribes—Bhils, Baugries, Moghies, Minahs, Goojurs, Mewatties—who had settled in Central India, and, in the absence of a strong Government to keep them down, made it their prey, there was a tribe termed Gwarriah, who supported themselves by kidnapping women and children, and resided "openly as such under the protection of Rajput chiefs who benefited by their crimes. . . . Female children and grown-up young women were bought by all ranks. . . . The females, almost in every instance, were sold to prostitution."

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* In referring to these mercenaries, who in some of the States—Guzerat, for example—occupied a position similar to that of the janissaries in former days at Constantinople, Sir John Malcolm remarks that: "No act has rendered the British power more popular than the complete expulsion of these trained robbers, none of whom remain. The character of all of them was nearly the same. Their chief features were that insolence and ferocity which a sense of a stronger frame of body and mind inspires in men who, like them, were mere soldiers, with no knowledge whatever beyond that of the profession of arms by which they were supported, and whose leading principle of action was a contempt of the native population of the country in which they were employed."

The miserable condition of the Bombay Presidency, now one of the most prosperous parts of India, can be judged by the account given by Sir James Macintosh of his travels. In fact, the whole of Southern India during the eighty years' war that ended with the death of the Moghul Emperor Aurangzeb in 1707, and from that time until it came under our sway, was the prey of violent and unprincipled armed mercenaries and freebooters. The Nizam, a Turkoman of the Sunni sect, who in 1724, after his defeat of the Emperor's troops at the battle of Shuckerd, had become virtually supreme over the six Soubahdarries, or provinces, to the south of the Nerbudda, was continually harassed by armies of Mahrattes, claiming the tribute of these provinces, which tribute had been granted to them by the Emperor in 1720. The whole country was kept in a perpetual turmoil. Rebellions, wars of succession, wars between the different States, Mahratta and Pindarry raids and exactions, and the fearful oppression of the people, joined with the contests between the English and the French and with native powers for supremacy in the country, make up the history of those times in Southern India. The religious exploits of Tutteh Ali Khan, known as Tipu, the Punjabi Mussulman, Sultan of Mysore, in forcibly breaking the caste of the Hindus in Coorg, Canara, and Malabar by forcing them to eat beef, his compelling them to become Mahomedans, his destruction and pillaging of 8,000 of their temples, with their roofs of gold, silver, and copper, and his seizure of 60,000 Christians in one night and the carrying of them into captivity, formed a few of the incidents which made the people welcome our rule. Describing the Nizam's dominions in 1784, Mr. J. Grant, an official of the East India Company, who had an intimate knowledge of them, speaks of the inhabitants as "wretchedly poor, oppressed, under the intolerance, tyranny, or weakness of innumerable Mussulman despots; subject to no restraints from the nominal superior, yet too feeble to resist any foreign invasion; the utmost gross yearly revenue that can be extorted from the native Hindus, by stripes, military execution, and the most wanton, inhuman, personal cruelties does not exceed a crore of rupees, after payment of the Mahratta *chouth* defalcations, of intermediate agents, and immense jaghire appropriations bestowed in favour of individuals, inferior coadjutors, who for most part assume a refractory, rebellious independence." This was after the Nizam had lost two-thirds of his dominions.

In Northern India, before we became supreme over it, the condition of the people was as evil as that in the South. The reimposition in 1676 of the *jaziah*, or poll tax on non-Mahomedans, by the Emperor Aurangzeb led the Rajputs, the backbone of his Empire, into rebellion. The oppression of the Sikhs drove them to revolt in 1710, and the fearful cruelty with which they were put down and nearly exterminated in the following six years gained for the Moghul Government the deadly hatred of that people. In 1718 Balaji, the first Mahratta Peshwa, marched an army to Delhi in support of the "Sayyid King-Makers" (two Arabs, reputed descendants of the prophet Mohamed, and Soubahdars, or "Governors," of the Provinces of Behar and Allahabad), who had deposed and killed two Emperors in succession, and were virtually supreme in the Empire from 1713 to 1720. As a recompense the Mahrattas were granted a *chouth* or fourth of the revenues of the Moghul Provinces in Southern India, and the Peshwa was confirmed in his assumed authority over the country around Satara and Poona.

In 1722 the Peshwa sent armies to reduce Guzerat and enforce the Mahratta imposts in Central India. Nine years later he marched a large army into the latter country and Nemaur and annexed them. From that time until 1817, when the English took the Rajput States under their protection, Rajputana suffered continually from the exactions and raids of the Mahrattas and their merciless auxiliaries the Pindarries. In 1738 the Emperor vainly endeavoured to expel the Peshwa from Central India by appointing the Nizam as Soubahdar. In return the Mahrattas commenced their raids from Central India and Berar into the North-Western Provinces and Bengal, proceeding beyond Agra and plundering the celebrated fair of Khalka Bhowani, within fifteen miles of the Emperor's capital of Delhi. From that time till they came under our rule these provinces had no rest from the Mahrattas, and the Moghul Empire rapidly declined. The invasion of Nadir, Shah of Persia, in 1739, his fifty-eight days' sack of Delhi and massacre of 150,000 persons in its streets, his annexation of Sinde and all the Moghul territories to the west of the Indus, and the revolt of the Afghans of Rohilcund shook the Empire to its foundations and made it an easy prey for the Afghans and Mahrattas. "God shield you from the vengeance of the elephant, cobra, and Afghan" is a saying still current among the Mahomedan Hindus. The cruelties inflicted upon Delhi and Northern India during the six Afghan invasions, 1747–61, has been rightly described by Sir William Hunter as "an appalling tale of bloodshed and wanton cruelty." The sack of Delhi by the Afghans, under Ahmed Shah Durani, resulted in the cession to them of the Punjab and other territory. In 1759, aided by the Sikhs, the Mahrattas determined to contest the sovereignty of Northern

India with the Afghans. Marching a great army of cavalry to Delhi, they took possession of the capital and drove the Afghans beyond the Indus. On the return of Ahmed Shah Durani, the following year, he was joined by Sujah Dowla, a Persian of the Shia sect of Mahomedans, who had been appointed Nawab of Oude and subsequently Vizier, the Nizam of Haidarabad, and other Mussulman rulers and chiefs, who had for some years been virtually independent sovereigns, and were exasperated at the frequent incursions of the Mahrattas. The joint Mahomedan forces encountered the Mahrattas at Panipat and inflicted upon them one of the most sanguinary defeats recorded in history. They are said to have lost 200,000 men. The return of Ahmed Shah Durani to Kabul, and the contests amongst the Mahomedan nobles for the different provinces of the dissevered Moghul Empire, and the wars of the Nawab Vizier of Oude, who held the Emperor in custody, with the English, 1759–65, enabled the Mahrattas again to march into Hindustan. In the latter year they were aiding the Nawab of Oude in his war against us, when their joint forces were defeated by Sir Robert Fletcher at Calpy. In 1771 they restored the Emperor to the nominal possession of his throne, the Peshwa being appointed the Vice-Regent (Vakeel ul Mootlik) of the Empire. Thence till the close of our war with Sindia in 1803, when Delhi and Agra, the two capitals of the Emperor, were ceded to us together with the Emperor's person, they were in the hands of the Mahrattas.

The condition of the North-Western Provinces in 1794, three years before we annexed Agra and Delhi and the neighbouring provinces, can be judged by the account given by Thomas Twining, a young official in the service of the East India Company, who proceeded from the British cantonments at Futtighur, on the Ganges, *viâ* Agra, to Delhi, by land, and returned by a different route across the Doab. He found the country infested in every part by large predatory bands of Mewatties, Pindarries, and Goojurs. The villagers were afraid to move out of their fortified villages. No one was safe without a strong escort of troops, and Colonel Palmer, who was passing through the country with an escort of 200 of the Company's Sepoys as ambassador to Sindia's Court, had recently been attacked by a body of Mewatties, several of his men being killed in the battle that ensued. Tired of describing the country he was passing through in his journal as "a complete waste," varied by the term "a perfect waste," he at length gave his opinion of the country as a whole—a country that is under our rule "a perfect garden." He said:—

> The whole country I was passing over, bordering upon the successive capitals of Hindustan, during the course of many ages and the shock of various

revolutions, might be considered as eminently historical, although the same cause which had reduced its plains to a desert and filled its forests with banditti and wild beasts had nearly effaced all traces of the important events of which it had been the theatre.

Sir William Hunter's work, "Orissa," gives a vivid description of that country before it became a province of Bengal under our rule, which I would recommend for the perusal of Messrs. Dadabhoi Naoroji, Seymour Keay, and Co. before they again vapour about "the steadily growing grinding poverty" of the masses in India. He says:—

> Wretched as the state of Orissa had been under the Moghuls, a half century of deeper misery remained for it under the Mahrattas. The memory of these fifty years haunted the whole population like a nightmare long after it passed under British rule. . . . The Mahratta Prince had his capital at Nagpur, in Central India, and waged incessant war upon his neighbours. His deputies, who were constantly changed and imprisoned on their recall, struggled to wring out of Orissa—the only peaceful province of his kingdom—a sufficiency to supply the military necessities of their master. . . . All the offices connected with raising the revenue were sold to the highest bidder. Every deputy who came to Orissa had ruined himself to buy his appointment, and he knew that the time allowed him for rebuilding his fortunes would be but short. . . . I have most carefully examined the records of this period, but I can detect absolutely no trace of anything like a Civil Administration. The Mahratta cavalry harried the country at stated periods each year, and departed with the spoil. . . . The peasantry, in despair of wringing their daily bread from the soil, either sold themselves across the seas, or were driven to the coast like dumb creatures, and shipped on board by their marauding Governors. . . . While nothing seemed more natural to the Indian mind than the practice of very poor people accepting domestic servitude for life in their native place, nothing could be more revolting to it than a sea-going trade in human flesh. One of our officials, Lieutenant Macpherson, has declared transportation across the sea to be as much dreaded in Orissa as death. In 1794 the slave trade from Bengal had reached as far as St. Helena, and the Court of Directors found itself forced to take up the question. Proclamations, rewards, and penalties remained alike ineffectual so long as the Mahrattas held the sea-coast. From the day we entered the province (in 1803) this abomination also ceased.

In the same author's work, "The Annals of Rural Bengal," we learn that the English found Bengal in the hands of banditti, and the names of the successful leaders of the last century, such as "Strong-fisted Khan," to be found in every native history, tell a story of rapine and oppression not difficult to read. Many of the principal families throughout the country, being dispossessed by the Mussulman tax-gatherers in whole or part of their lands, lived by plunder; the only difference between the highland and lowland proprietors being that the former marauded more openly and on a larger scale. The latter, indeed, found it more profitable to shelter banditti on their estates, levying black-mail from the surrounding villages as the price of immunity from depredation, and sharing the plunder of such as would not come to terms.

Their country houses were robber strongholds, and the early English administrators of Bengal have left it on record that a gang robbery never occurred without a landed proprietor being at the bottom of it. Bands of cashiered soldiers, the dregs of the Mussulman armies, roamed about plundering as they went. "A set of lawless banditti," wrote the Council in 1773, "known under the name of Sanyasis or Faquirs, have long infested these countries; and, under the pretence of religious pilgrimage, have been accustomed to traverse the chief part of Bengal, begging, stealing, and plundering wherever they go, and as it best suits their convenience to practise." The Thugs did a thriving business in Bengal, and dacoitee continued to flourish in that province for more than three-quarters of a century after we took over the country. Not only was Bengal the prey to local robbers, but from 1741, sixteen years before the battle of Plassey made us a power in the land, it had been a plundering ground of the Bhonsla Mahratta chief of Nagpur, whose forces yearly ravaged the country. In 1751 this chief obtained a formal grant of a *chouth* or "quarter revenue" of Bengal, together with the cession of Southern Orissa, from Ali Verdi Khan, the Afghan Nawab who had usurped the Government in 1740. This grant did not put a stop to the raids, which continued up to the time of our rule, when further tribute was refused to the Mahrattas.

The way the revenue was collected in Bengal under the former Government is thus pithily expressed in a despatch to the Court of Directors by Warren Hastings, dated November 3rd, 1772 :—

> The Nizams (Viceroys) exacted what they could from the Zamindars and great farmers of the revenue, whom they left at liberty to plunder all below them, reserving to themselves the prerogative of plundering them in their turn, when they were supposed to have enriched themselves with the spoils of the country.

As to criminal administration, it consisted in the sale of judicial places to uneducated and depraved Mussulmans, who looked upon a court as a secure den for extortion. Under the Mahrattas, Sir John Malcolm tells us, the system of imposing fines was extended by collectors and renters, when they were sufficiently powerful, over all the villages under their management ; and no demands fell so heavy, in times of trouble, as those impositions, called Gonahgari, on crimes. The common plea was a murder or theft within limits, or some act of an individual, or the community, that was assumed to have caused loss to Government or the Governor of the country.

He furthermore reported that :—

> Adultery, second marriages, broils, and all irregularities are subject to these fines. The excess to which this source of revenue has been carried in some of the large towns of Central India is almost incredible. In the city of Oojein (Ujjain) the fines arising from irregularities are rented, and the renter employs

men and women in every quarter of the city to allure persons into situations where they can be accused. Affrays are contrived, when respectable and wealthy persons are present, who, while the agents of the renters fly, are seized and hurried into confinement, from which they can only be released on payment of a fine. But women are the instruments through which the largest sums are extorted. The most profligate are tutored to act the part of respectable heads of families, assignations are made, and the unwary deluded into the hands of the police, from which they can only escape by paying a sum which is always more proportionate to their means than their offences. Innocent persons are continually accused, from the hope of their paying sums of money to avoid the scandal which always attaches to such accusations.

In page 259 I related how the Mussulman Sultan of Mysore treated the Hindus. As a companion picture, it may be well to allude to the treatment of his Mussulman subjects by the Hindu Maharaja of Alwar. In 1811, according to Colonel Malleson, the Raja was seized by a religious frenzy, which could only be gratified by the persecution of his Mahomedan subjects. He destroyed their mosques, and seizing some of their devotees, he mutilated them, and sent their noses and ears to a neighbouring Mahomedan prince. His savage zeal did not stop there; and among other exploits he caused the bodies of Mahomedans to be disinterred, and sent their bones out of the country. Having given a general idea, from reliable authorities, of the state of India before the advent of our beneficent sway, which calmed the troubled waters and brought peace and the dawn of long absent happiness to this great section of the human race, I have prepared the ground for the consideration of past and present taxation in India.

ANCIENT TAXATION IN INDIA.

The Mahabrata, the most venerable and venerated Sanscrit epic, which relates the struggle between two families of the Lunar race for a patch of country near Delhi, probably about 1200 B.C., affords us the earliest knowledge of taxation in India. Its great antiquity is undoubted, though the first external evidence of its existence is supplied by Dion Chrysostomos, *circ.* 75 A.D. In this work we are told that the sage Bhishma, on being interrogated, related the institution of government as follows :—

> Without a ruler no country can prosper; health, virtue, &c., are of no avail; two will invade the property of one, and many again will attack two; thus men will eventually destroy each other, as the various species of fish. A Raja protects the people as a larger fish the smaller. In this manner mankind were continually oppressing each other, when they went to Brahma to give them a ruler. Brahma directed Manu (the founder of Sanscrit law) to become their Raja. He replied, "I fear a sinful action. Government is arduous, particularly so among ever lying men." They said unto him, "Fear not, you will receive a recompense, of beasts a fiftieth part, and thus also of gold; we will give you a tenth of corn, increasing your store; a becoming duty of damsels, and on disputes and gaming. Men exalted in wealth or science shall be subordinate to you as gods are to the great Indra; thus become our Raja,

powerful and not to be intimidated; you will govern us in peace, as Koorun does the Yukshus. Whatever meritorious actions are performed by subjects protected by the Raja, a fourth part of the merit shall belong to you." Thus let those who desire advancement hold the Raja superior to themselves, as a disciple the religious instructor, as the gods the divine Indra, let them in his presence adore the man who is Raja. The Raja despised by others is a cause of pain to all; therefore let them give him the canopy and umbrella, clothes and ornaments, food and drink, dwellings, seats, couches, and all accommodations.

The character of the taxation in Southern India as early as A.D. 1118 is evidenced by the careful translations made by Dr. Hultzsch of the inscriptions in the Tanjore temple. In referring to these inscriptions at a meeting of the Society of Arts in February, 1895, Mr. R. Sewell stated that:—

> The taxation under old native rule was oppressive. The Tanjore temple inscriptions of the year 1118 showed that the first tax imposed on the villages was for land revenue; then came the tax in money, whatever that might be. These two may be set off against all of ours. Then there were three taxes of which there was no translation; other taxes were for officials, on fruit, on looms, on oil mills, and another on trade generally—a very wide term. At present, if a ryot (peasant farmer) dug a watercourse, or made a tank, he received the full benefit from it; but in those days he was promptly taxed for having done the work. Taxes were also imposed on weights and measures, on drugs which had gone bad in the bazaar, on shops, on salt, on elephants and stables. Considering how taxes were collected in India in old days, a pretty good idea could be formed from this of the state of things formerly existing.

The assessment for land revenue in Tanjore and other parts of Southern India during those early times was probably light, for I find in Mr. Thackeray's Report on Malabar, dated August 4th, 1807, that the land tax in Canara in 1347 amounted to only one-sixth of the crops, whereas in 1758 it aggregated 45 per cent, and under Tipu it was over one-half. In Hindustan, or Northern India, even under Mahomedan rulers, the land tax, except under the Tughlak dynasty (1320-1414), appears to have been equally light until the commencement of Akbar's reign in 1556. Abul Fazl tells us in his "Ain I Akbari," which was completed in 1596, that, "under Mussulman rulers, throughout the whole extent of Hindustan, where, at all times so many enlightened monarchs have reigned, one-sixth of the produce was exacted." It must have been even lighter than one-sixth of the crops in certain districts before the reign of Mohamed Tughlak, who, according to Sir William Hunter, was the first Mussulman ruler of India who can be said to have had a revenue system. This enlightened monarch, we are told, increased the land tax between the Ganges and the Jumna, in some districts ten-fold, in others twenty-fold. The husbandmen fled before his tax-gatherers, leaving their villages to lapse into jungle, and formed themselves into robber-clans. His son, we are told, "ruled mercifully." How the Hindus were trodden down by their Mussulman rulers, even during his merciful reign, can be imagined from the following instructive passage in the "Tarikh I Firuz Shahi":—

> When the Collector of the Division (Finance Minister) asks them (the Hindus) to pay the tax, they should pay it with all humility and submission. And if the Collector wishes to spit into their mouth, they should open their mouths without the slightest fear of contamination, so that the Collector may do so. In this state (with their mouths open) they should stand before the Collector. The object of such humiliations and spitting into their mouths is to prove the obedience of infidel subjects under protection, and to promote the glory of Islam, the true religion, and to show contempt to false religions.

TAXATION REMITTED BY AKBAR.

The list of the imposts remitted by the Emperor Akbar, and which were all subsequently reimposed,* is taken from the "Ain I Akbari," where Abul Fazl informs us that:—

> Many imposts equal to the amount of the income of Hindustan (Rx.42,000,000 in Akbar's reign) were remitted by his Majesty as a thank-offering to the Almighty. Among these were the capitation tax (the Jazia, or poll tax on non-Mohamedans, subsequently reimposed in 1677 by Aurangzeb); the port dues;† a tax per head on gatherings at places of worship;‡ a tax on each head of oxen;§ a tax on each tree, presents, distraints; a tax on the various classes of artificers; daroga's fees (a daroga was the superintendent of any department, such as the police, mint, &c.); tahsildar's fees;‖ treasurer's fees; complimentary offerings on receiving a lease and the like; lodgings charges; money

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*According to Mr. James Grant, Aurangzeb, the last great Emperor of India, who reigned 1658–1707, abolished by edict seventy of these articles of taxation, but the selfish lenity of the prince, the refractoriness of the foujdars (police magistrates and commanders of the militia) and jaghiredars, "together with the future disorders of the Empire, virtually prevented then and ever since (he wrote in 1786) the carrying into effect the royal mandate." 769 of such items of taxation were swept away in Mysore by the British in 1834, when we took temporary charge of that Indian kingdom.

† In Ain 26, Abul Fazl shows that these dues were reduced, not abolished. He says: "The State takes certain taxes in harbour places, but they never exceed 2½ per cent, which is so little, compared with the taxes formerly levied, that merchants look upon harbour taxes as totally remitted." The transit duty on rivers, in the case where the boat and cargo belonged to the same man, was also reduced and fixed at the rate of one rupee per two miles for a weight of 24¾ tons, *i.e.*, approximately two rupees in Akbar's time, or, in the present day value, ten rupees per ton for every 100 miles; in like manner the stated abolishment of excise duty on manufactures is shown in Ain II. to have been a reduction "from 10 to 5 per cent."

‡ Under the Mussulman dynasty, the Government gained a revenue of a million rupees from Hindu Pilgrims at the Temple of Jagannath in Orissa alone.

§ This was only remitted to the extent that each plough was allowed tax free four oxen, two cows, and one buffalo; for animals pastured in excess, the rate of taxation was fixed as follows:—For each buffalo six dams, for an ox three dams. One pair of oxen in India cultivates, on an average, thirteen acres. No tax was imposed on calves or buffaloes which had not calved. *Value of money in Akbar's time:* A dam was the fortieth part of a rupee; and a rupee in Akbar's time had five times the purchasing power in the case of wheat, barley, and millet, the staple grains of Hindustan, that it has at present; this is evidenced by comparing the price list given by Abul Fazl with the prices at Delhi in 1893, given in the statistical abstract relating to British India. In 1595 a rupee purchased at Delhi 90 seers of wheat, 135 seers of barley, and 135 seers of millet respectively; whereas in 1893 a rupee purchased at Delhi 16·62 seers of wheat, 27·50 seers of barley, and 29 seers of millet respectively. According to Sir William Hunter, silver in Orissa in 1680 had six times, and in 1770 twice, and in cases even thrice, the purchasing power it has now.

‖ The tahsildar was the collector of revenue immediately over the village patwaris; the patwari was the land steward and village accountant employed on the part of the cultivators to keep the accounts of receipts and disbursements.

bags; testing and exchanging money; market dues; sale of cattle; hemp; blankets; oil; raw hides; weighing and scaling; likewise on butchers' dues, tanning, playing at dice, passports, turbans (a poll tax levied on every turban), hearth money, fees on the purchase and sale of a house, on salt made from nitrous earth, on permission to reap the harvest, felt manufacture of lime, spirituous liquors, brokerage, catching fish, the produce of the Al tree; in fine, all those imposts which the natives of Hindustan include under the term Sair Jihat were remitted.

TAXATION UNDER AKBAR (1556–1605).

In Ain 4, treating with the Kotwal, or chief officer of police in large towns, who performed the duty of Revenue Collector where none had been appointed, that officer is instructed to so direct that no one shall demand a tax or cess save on arms, elephants, horses, cattle, camels, sheep, goats, and merchandise; and to see that all old or light coins were given up and consigned to the Treasury as bullion, the holders making good the deficiency. He had to supervise the weights and measures, to see that the ser was kept at its standard weight of 30 dams (the dam weighing a little over 326·17 grains troy); and that the gaz ($39\frac{3}{4}$ inches, the standard measure of length) was neither decreased or increased.* Amongst his other various duties, the Kotwal had to use his discretion in the reduction of prices, and was not to allow purchases to be made outside the city. He had, moreover, to protect the people against the action of various officials who claimed as perquisites what they required from the people, even beyond their own necessities: for he had to see "that the rich shall not take beyond what is necessary for their consumption." He had to forbid the restriction of personal liberty and the selling of slaves. He was not to suffer a woman to be burnt alive against her inclination.

In Ain 5, we learn what perquisites the Revenue Collectors were in the habit, before and after Akbar's time, of taking, by what they are bade to forego. We are told that "he shall not make the occasions of journeying, feasting, or mourning an opportunity for exactions; that he is to refrain from accepting presents; to renounce balkati, the practice of taking a small fee from each village when the harvest is ready for reaping; and shall waive all perquisites on handicraft, market booths, police, travelling passports, garden produce, temporary sheds, enclosures, fishing rights, port dues, butter, oil of sesame, blanketing, leather, wool, and like malpractices of the avaricious who fear not God."

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* The bigah duftry, or unit of area upon which Akbar's land revenue was raised, consisted of 3,600 square gaz, and in his time slightly exceeded $\frac{9}{10}$ths of an acre. Owing to the continuous rise in prices in subsequent reigns the monarchs found that they were not receiving their due share of the land produce, the land revenue being assessed in most of the provinces in money. In order to remedy the growing disproportion between the gross produce of the land and the royal proprietary share, a reduction of two-thirds was made in the square extent of the bigah in the Soubahs, or provinces of Delhi, Agra, and Bengal (Mr. James Grant's "Report on the Northern Circars," in 1786, attached to the "Fifth Report on the Madras Presidency").

The Raja Todar Mal, the celebrated Finance Minister of Akbar, in order to compensate for the loss of revenue due to his reforms, doubled the assessment for land revenue in the more settled provinces, raising it from one-sixth to one-third of the gross produce of ordinary land, and determined that it should not be paid as heretofore, in produce, but in the money value of the produce. In the case of garden lands, which had to be irrigated and heavily manured, and where the expense of cultivation was consequently great, the revenue demand, varying from one-fourth to one-eighth of the crops, although proportionately smaller, was relatively larger owing to the character of the crop—indigo, poppy, turmeric, musk-melons, vegetables, &c. Where, as in Bengal, the revenue was still to be taken in produce (buttai), the assessment was fixed at one-half of the yearly produce. Besides the land revenue a tax of ten sers (a ser equalled about 1·4 lbs.) was taken from each bigah of tilled land to supply the animals belonging to the State with food, "which is never bought in the Bazaars."

Ain 24 refers to the Haldarry, or marriage tax, and runs as follows:—

> His Majesty has also appointed two sober and sensible men, one of whom inquires into the circumstances of the bridegroom, and the other into those of the bride. These two officers have the title of Tuibegi, or Makers of Marriages. In many cases the duties are performed by one and the same officer. His Majesty also takes a tax from both parties, to enable them to show their gratitude; the payment of this tax is looked upon as auspicious. Mancabdars* commanding from five thousand to one thousand pay ten mohurs (90 rupees); those from a thousand to five hundred, four mohurs (36 rupees); those of a hundred, one mohur (nine rupees); those of ten, four rupees. The latter fee is also paid by rich people. The middle classes pay one rupee, and the common people one dam. In demanding this tax (which was taken from both parties), the officers have to pay regard to the circumstances of the bride.

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* Princes, nobility, and gentry bound to supply, equip, horse, and retain a body, or Mancab, of cavalry, varying according to their rank from 10 to 10,000. All commands over 5,000 were given to Akbar's sons. The higher Mancabdars were mostly Governors of Cubahs, or forts, and were termed Cubahdars. The other Mancabdars received the whole or part of the Government share of the revenue of large estates in Jaghire under Imperial grant for life for their personal support, as well as the Government share of the revenue of other estates, temporarily in Serinjam, for the support of their contingents, who were termed Tabinat, or followers, hence Tabin-Bakshi the Mancabdar himself, or his Bakshi (paymaster colonel). There were 1,800 Mancabdars in Akbar's reign, besides the three Royal Princes. The contingents of the Mancabdars are said to have aggregated 548,000 men. These formed the greater part of the regular army, and were mustered at stated intervals and paid from the general or local treasury. According to Badaoni, "The whole country with the exception of Kalicah land (royal domains) were held by the Amirs (Mancabdars) in Jaghire." They were said to have cheated the State by not keeping up the proper number of their contingent, merely dressing up their attendants or borrowing soldiers for their musters. Many of the Mancabdars were appointed Croris or Revenue Collectors on Government land, not jaghire, yielding a *crore* of dams (250,000 rupees). Besides the regular army, the zemindars of the country furnished 343,354 cavalry, 4,061,707 infantry, as militia, used also in collecting the revenue, besides 1,963 elephants and 4,500 boats. The Soubahdar or Governor of a province likewise held the post of Sipahsalar, or commander-in-chief.

Badaoni, remarking on the subject in the next century, says :—

> The sons and daughters of common people were not allowed to marry unless they came to the office of the Kotwal and were stared at by the Kotwal's men, who had to take down their respective ages. (Akbar had ordered that boys were not to marry before the age of sixteen nor girls before fourteen, because the offspring of early marriages were weakly. No one was to marry more than one wife, except in case of barrenness. If widows wished to re-marry they might do so, though this was against the ideas of the Hindus.) And you may imagine what advantages and fine opportunities the officers thus had, especially the people of the Kotwal and their low assistants outside.

REVENUE OF INDIA UNDER MOGHUL RULE.

The revenues of the Moghul Emperors at thirteen different periods from 1593 to 1761, from a smaller area and population than those of British India, are given in the annexed table (p. 270) taken from Sir W. W. Hunter's work, "The Indian Empire."

From this table it will be seen that under the Moghul Empire the land revenue particularised in page 268 formed considerably less than half of the whole revenue of the portions of India under its direct sway. But a great deduction has to be made from the area in cultivation at that period before a just comparison can be made between the rate of the land revenue collected under our rule and that of our predecessors. We have no exact data, so far as the Moghul dynasty is concerned, but we know that enormous tracts of the country were held more or less free from land revenue demands in Jaghire, Nankar, and Enam under that dynasty as well as under other native dynasties in India. In Runjeet Sing's time three-eighths of the cultivated ground in the Punjab was held in Jaghire in feudal grants for which a service equivalent was obtained; and Sir John Malcolm found, from careful inquiries in Central India, that, under the Mahratta rule, "The alienation of land in Central India on account of Wuttundar rights (partially or wholly revenue-free lands, granted as part of their Nancar or salary to district and local officials), petty engagements, and charitable purposes (Enam), amounted to more than one-third of the soil that is productive to the State," besides which the revenue dues of great tracts of country were temporarily granted in Jaghire by the Mahrattas to their generals as Serinjam for the support of troops. A good third would have to be added to the land revenue received by the Moghul exchequer to arrive at a basis for comparing the land revenue actually collected from the people under native and British rule, and then we should have to take into account that the population and the area under cultivation is now, in all probability, at least three times as great as it was in 1761.

Under the Moghuls a tax termed the "Nayay" was imposed in order to prevent any diminution in the land revenue. This tax

	Moghul Emperors.		Authority.	Land Revenue.		Revenue from all Sources.
		A.D.			RX.	RX.
1	Akbar,	1593	Nizam-ud-din Ahmad : not for all India......		——	32,000,000
			Allowance for provincial troops (bumi)		——	10,000,000
						net, 42,000,000
2	,,	1594	Abdul Fazl MSS. : not for all India	net,	16,574,388	——
3	,,	,,	Official documents ,, ,, ,, ...	,,	16,582,440	——
4	,,	1605	Indian Authorities quoted by De Laet	,,	17,450,000	——
5	Jehangir,	1609–11	Captain Hawkins		——	net, 50,000,000
6	,,	1628	Abdul Hamid Lahori............................	,,	17,500,000	——
7	Shah Jahan,	1648–49	,, ,, ,, ...	,,	22,000,000	——
8	Aurangzeb,	1655	Official document..................................	gross,	26,743,970	——
				net,	24,056,114	——
9	,,	1670 ?	Later Official documents	gross,	35,641,431	——
				net,	34,505,890	——
10	,,	1695	Gemelli Careri		——	net, 80,000,000
11	,,	1697	Manucci (Catrou)	,,	38,719,400	,, 77,438,800
12	,,	1707	Ramusis	,,	30,179,692	——
13	Shah Alam,	1761	Official statement presented to Ahmad Shah Abdali on his entering Delhi	,,	34,506,640	——

acted in a most cruel manner in times of Mahratta, Pindarri, and other raids, and of war, pestilence, or famine. It was thus alluded to by Warren Hastings in a despatch dated November 3rd, 1772:—

> It is called "Nayay," and it is an assessment upon the actual inhabitants of every inferior description of the lands to make up for the loss sustained in the rents of their neighbours who have either died or have fled the country. This tax, though equally impolitic in its institution and oppressive in the mode of exacting it, was authorised by the ancient and general usage of the country. It had not the sanction of Government, but took place as a matter of course. In ordinary cases, and when the lands were in a state of cultivation, it was scarcely felt, and never or rarely complained of. . . . But the same practice, which at another time and under different circumstances would have been beneficial, became at this period (the famine of 1770-71, when Bengal lost about one-third of its population) an insupportable burthen upon the inhabitants.

TAXATION OF INDIA WHEN WE ANNEXED THE COUNTRY.

The oppressive taxation in the Madras Presidency at the time we annexed it can be judged from the "Fifth Report of the Select Committee on the Affairs of the East India Company, Madras Presidency," dated July 12th, 1812. This report was based upon a large body of documentary evidence given by officials placed in charge of districts on or shortly after their annexation, and which cannot be gainsaid. According to the Report of the Committee, by the custom of the Hindu Government the cultivators were entitled to one-half of the paddy (unhusked rice) produced depending on periodical rains. Of the crops from the dry land watered by artificial means the share of the cultivator was about two-thirds. Before the division took place certain deductions were made. These consisted of certain small shares of the crops of the village which were given as perquisites to the pagoda establishment, local officers of the Government, and to village servants. These classes had likewise certain portions of land appropriated to them. On garden culture the ryots had to give the Government from one-fourth to one-eighth of the entire yearly crop, according to the additional expense, trouble, and time required in bringing such articles to maturity and the distance and hazard of carrying them to market. The Report then proceeds to state that:—

> Such were the rights of ryots, according to the ancient usage of the country. In consequence, however, of the changes introduced by the Mahomedan conquest, and the many abuses which later times had established, the share really enjoyed by the ryots (peasant farmers) was often reduced to a sixth, and but seldom exceeded a fifth.*

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* According to the "Statement of the Progress and Condition of India, 1894-95," our revenue demand in the permanently settled tracts of Bengal is only about "one twenty-fourth of the gross value of the produce;" and in the temporarily settled tracts of Madras and the North-West Provinces is "about one-tenth to one-twelfth of the gross value of the produce." The ryots cultivating their own land even in the latter case enjoy from nine-tenths to eleven-twelfths of the produce. This shows how greatly they have benefited under our rule.

This was accounted for by additional assessments, which had no bounds, on the land; by the arbitrary demands and contributions to which they were subjected; and by the custom which had become common with the Mahomedan Government, and quite general under Mahomed Ali, the Nawab of the Carnatic, to farm out the lands in extensive tracts, often whole provinces, for a certain number of years to individuals who sub-rented them by villages to the headmen, who were left to collect from the other cultivators as they pleased. The oppression of the under-renters principally consisted, in the Carnatic, as they did in the Northern Circars, in levying private contributions on frivolous and unwarrantable pretences; in under-assessing the lands occupied by themselves, their relatives, and friends, making up the difference by an over-assessment of the other village cultivators; in forcing the inferior ryots to cultivate their lands, furnish them gratuitously with labourers, bullocks, carts, and straw, and perform for them free of charge various other services; in monopolising the produce of several villages, which they afterwards disposed off at an advanced price; and in applying to their own use the allowances and perquisites of the pagodas and village servants, by which the parties were deprived of their rights, or the inhabitants—as was often the case—were obliged to make good the loss. Added to these evils was the turbulent and warlike spirit which pervaded the local Mancabdars, known as Poligars and Hillzemindars, who, although receiving their lands at one-fourth of the produce, or one-half the usual revenue demand, on account of their keeping up a body of military retainers for Government service, were no better than robber chiefs. They not only set the Government at defiance but levied blackmail from the neighbouring villages, and were constantly waging petty wars against each other. Thus the fields of the ryots were overrun, their crops destroyed, and whatever property they possessed became the prey of the contending bands. Even the headmen of villages in many districts had their small band of military retainers and carried on a similar intestine war, though on an inferior scale.

In addition to the assessment on land, duties were levied at almost every stage through the country and on every successive transfer of property, on grain, cattle, salt, and all the necessaries of life. Duties were likewise levied at different stages on passengers* and pilgrims. These duties, we are told, collected by "corrupt, partial, and extortionate agents, produced the worst effects on the state of society by not only checking the progress of industry, oppressing the manufacturer and causing him to debase his manufacture, but also by clogging the beneficial operations of commerce in general, and abridging the comforts of the people at large." The Customs duties on imports and exports at ports were fixed so as to unjustly favour Mahomedan traders, who had only to pay a duty of 2½ per cent *ad valorem*, whereas non-Mussulman merchants were mulcted in 5 per cent. Then there were imposts, "indefinite in their amount and vexatious in their nature," on houses in general, on shops of workmen and retail merchants, on temporary stalls erected at fairs and places of Mahomedan pilgrimage and Hindu worship, on manufactured cloth, on looms (1¼ rupee per annum on a loom), on implements of agriculture, on cattle, on marriage,* &c., and a poll tax on artificers and manufacturers. Licences had to be taken out by makers and sellers of spirituous liquors; and certain articles, such as salt, arrack, beetle-nut, and tobacco, were made Government monopolies and sold to the highest bidder. A vast proportion of the tax revenue clove to the hands of the collectors and their agents, and many of the duties mentioned above and omitted were squeezes collected by the zemindars, revenue farmers, and even the inferior collectors, without the sanction of the Government, the proceeds being taken as perquisites. As to the revenue received from fines and confiscations, and from the *chouth*, or fourth part—the Government share—of sums litigated, they made, we are told, "no inconsiderable part of the public supply."

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* At all the fords and passes the unhappy pilgrims had to pay toll. Every Governor along the road levied as much as he could extort from the 40,000 to 100,000 pilgrims who annually journeyed to the great idol of Jagannath in Orissa. One chief fixed the impost in his district at the enormous rate of £1. 9s. for each foot passenger.

It would be a mere repetition of the above to describe the condition of taxation in other parts of India at the time we annexed them. The remark quoted from the despatch of Warren Hastings, in page 263, applies equally to all of them. To top the structure, however, it will be well to note how the ryots were further fleeced when paying the land revenue demanded. The description is taken from Sir William Hunter's "Annals of Rural Bengal," and runs as follows:—

> The treasury officers exacted an ample discount from the landholders, a discount which, when Bengal passed under British rule, amounted to 3 per cent after a coin had been in circulation a single year, and to 5 per cent after the second year, although no actual depreciation had taken place. The landholder demanded a double allowance (6 to 10 per cent) from the middleman,

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* Amongst the 769 petty items of taxation swept away by the British in Mysore, when we took over the administration owing to the Raja's misgovernment, were, besides a marriage tax, taxes on a child being born, on its being given a name, and on its head being shaved. This is equivalent to a tax at birth, at christening, and at confirmation.

and the middleman extorted a quadruple allowance (12 to 20 per cent) from the unhappy tiller of the soil. Some collectors accepted payment in gold, others refused it. The miserable peasant never knew whether the coin for which he sold his crop would be of any use to him when he came to pay his rent.

A few words may be added to elucidate the "Extra Dues," as yet not referred to, which were levied on the village as a whole in every part of India before we annexed it. In his report on the Punjab, dated October 25th, 1851, a few years after we had annexed it from the Sikhs, Sir Richard Temple, then Settlement Officer at Jullundhur, states that:—

> The primary object in the mind of a Sikh financier was to extract the utmost from the land. Indian—indeed, Asiatic—experience has usually shown that the occupant of the soil, be his rights what they may, can give up to the State half the produce without ruining himself or impairing the resources of cultivation. This proportion the Sikhs resolved to demand. . . . But it was one thing to demand, and another to collect, half the gross assets of a harvest. The villagers, of course, corrupted the tax-gatherers and the appraising officers. It may be safely affirmed that less than half * was collected from the fields or granaries, and much less than half found its way to the Kardar's (Provincial Governor's) treasury. The deficit, however, was made up in another way. Extra dues were levied on all imaginable pretences, such as are known to English history under the name of feudal aid, forced loans, purveyances. Then there were presents to the King, his Court, his Ministers, his favourites, the Provincial Governors, and their train of subordinates; gifts on the occasions of marriages, solemnities, or festivities in families of royalty or nobility; subsistence allowance for the Sowars and other Government menials and myrmidons who were constantly quartered and billeted in the villages. Besides these there were the necessary subscriptions for village expenditure, or the illegal gratuities paid to the servants of the Government. All extra imposts were gathered together under the dreaded name of *Mulba*. I have heard of the *Mulba* in a village equalling a revenue; none of those little perquisites which add much to the comforts of rural life escaped the grasp of the Kardar. Grass, wood, timber, fruit, garden produce, were all seized upon, to say nothing of the imposts which fell upon the agriculturist in common with the other residents of the village. The site of the village could not be removed, no house could be built, no well erected, no plot enclosed, without the payment of a fee. I presume, therefore, that the collections, regular and irregular, did, in the aggregate, amount to half the gross assets. However, I do not believe that the Sikhs ever, for any length of time, collected more than half, because then the vitality of the agricultural community would have been sapped away. But had such a thing been possible I think the Sheiks (former Governors of the Jullundhur Province) and others would have done so.

In addition to the land revenue demand and the extra dues, the people in the Punjab, under Runjeet Sing, were, as under other native Governments in India, subject to Excise, Customs, and town duties. At Umritsur, for instance, the Customs and town duties on indigo amounted to eight rupees per 105lbs., and on sugar to two rupees for the same weight. We are told in the Administration Report of the Punjab, dated August 19th, 1852, that the whole country was threaded with a network of preventive lines. These lines were dotted with innumerable posts for the collection of every kind of tax, direct and indirect. At the same set of stations Customs taxes, town duties, transit duties,* capitation imposts, artisans' fees, were all levied. The principle was to extract taxation from everything indiscriminately. No distinction was made between domestic and foreign industry, between articles of indigenous and extraneous production. The cotton, indigo, and sugar of the Punjab had to pay Excise. Nor was salt the only necessary of life subject to taxation; ghee (or clarified butter), tobacco, vegetables, all the poor man's luxuries, were placed under contribution. Every doab being intersected with these lines, no article, home or foreign, could traverse the kingdom in its length or breadth, nor could enter any great market, without paying duty a dozen times over. According to the Report, "The taxation could not be called uneven, inasmuch as it embraced everything, every class, from the richest to the poorest, every locality, every thoroughfare, every town and village, every article, wherever sold, whether imported or exported, domestic or foreign." When we are likewise told that the Rajpoot landowners were not only over-taxed, but ground down by Sikh priests and officials, and also by the Jat Kardars, and often had their villages destroyed and their mosques desecrated, their fate under Sikh government must indeed have been miserable.

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* Only a third of the value of the gross crop reached the Sikh exchequer; this is evident from a table given in the Administration Report on the Punjab for the years 1849–50 and 1850–51.

THE JAZIAH, OR POLL TAX, ON NON-MOHAMEDANS.

The Jaziah, or tribute imposed by the Moghuls on the non-Mahomedan population, had been remitted some years before our sway commenced in India, but it was subsequently imposed by Tipu, Sultan of Mysore, in Malabar and other conquered territories. As reimposed by Aurangzeb in 1677, it is thus referred to by Sir William Hunter in his work, "The Indian Empire":—

> For the purposes of this tax, the non-Mahomedan population was divided into three classes, paying respectively £4, £2, and £1 annually to the exchequer for each adult male. The lowest of these rates, if now levied on each non-Mussulman male adult, would alone yield an amount exceeding our whole taxation.

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* When Orissa was under the Moghul, according to Sir William Hunter, the transit duties on timber carried forty-two miles in the Ganjam District by road aggregated 133 per cent *ad valorem*. By a river route the extortions in the same distance were greater, aggregating over 256 per cent *ad valorem*. Besides the royal officers who levied a tax at every few miles, each petty proprietor through whose estate the route lay lined the road with hungry myrmidons. Such duties could not fail to stop all through trade, and practically restrict foreign trade to the seaports.

TAXATION IN BRITISH INDIA IN 1894–95.

In comparing the taxation under British and native rule we must take the table of "Net Revenue," given on page 37 of the "Report on the Progress and Condition of India, 1894–95," and, after making the needful deductions, compare it with the revenue received by the Moghul Government, as shown in the table given in page 270 of this article.

NET REVENUE.

Revenue.	Gross Revenue.	1894–95. Deductions.		Net Reveuue.
		Refunds and Drawbacks.	Charges in respect of Collection.	
	Rx.	Rx.	Rx.	Rx.
Land Revenue................	25,408,272	49,886	4,048,132	21,310,254
Opium	7,323,757	2	1,616,105	5,707,650
Salt	8,665,749	36,839	498,415	8,130,495
Stamps	4,625,680	57,196	175,839	4,392,645
Excise	5,527,676	27,273	192,809	5,307,594
Provincial Rates..............	3,541,154	5,531	56,438	3,479,185
Customs	3,854,955	80,085	174,547	3,600,323
Assessed Taxes	1,808,060	13,352	29,771	1,764,937
Forest	1,631,548	8,304	913,449	709,795
Registration..................	418,200	1,207	229,631	187,362
Tributes from Native States....	780,070	880	....	779,190
	63,585,121	280,555	7,935,136	55,369,430
Deduct Assignments and Compensations.................	....	....	....	1,506,350
Total Net Revenue............	....	....	....	53,863,080

In the table of "Net Revenue," the following deductions have to be made in the column headed "Gross Revenue":—

(1) Rx.7,126,942, on account of opium sold for consumption outside India; no part of this amount falls on the Indian taxpayers.

(2) Rx.1,993,122, on account of duty paid salt sold to native States.

(3) Rx.780,070, on account of tributes received from native States.

Total deductions Rx.9,900,114

This leaves the gross revenue derived from land and taxation, other than municipal, during the year 1894–95, as Rx.53,685,007. Of this amount, the land revenue and provincial rates, aggregating Rx.28,949,416, represent the Imperial and local land revenue upon the whole area of cultivation in British India. The gross revenue from other sources, including the forest revenue, which can hardly be called taxation, was thus only Rx.24,735,591, or less than 1s. 3d. per head, against an imperial taxation in England in 1894 of 51s. 8d. per head.

In the table contained in page 270, it appears that in 1697, two hundred years ago, when the Moghul dominions were at their largest extent, comprising an area about equal to that of British India, the gross receipts of the Moghul exchequer from all sources was estimated at Rx.77,438,800, one-half being derived from the land revenue, and the remainder from taxation. Investigation has shown that in Orissa silver possessed in 1680 six times* the purchasing power that it has now. In comparing the Indian revenue of that day with what it is at present under British rule, this fact should not be lost sight of. Taking this into consideration, and assuming to be within the mark that on an average throughout India it had three times its present value, we find that in present day values the gross estimated revenue under the Moghul Empire in 1697 is equivalent to Rx.232,316,400 at the present day, or more than four times as much as the revenue demand made upon the country in 1894–95. It is impossible to imagine how such a revenue could have been wrung out of the people, for in the case of land revenue it would have absorbed more than the whole value of the staple crops and left the people for subsistence merely what they could get from breeding animals and fowls, and by the sale of eggs, butter, milk, and ghee, and out of garden produce.

The statement of the land revenue of Shah Alam, given in the table, is of no use for comparison. By 1761 his Empire had been dismembered, as shown in page 260, in the west by the Afghans, and in the south by the Mahrattas and other powers. But even in his greatly restricted Empire the land revenue apparently amounted to Rx.34,506,640, and at the end of last century, according to Sir William Hunter, silver had more than twice its present purchasing power. His land revenue, at its then purchasing power, would now represent Rx.69,013,280, or far more than double the present land revenue of British India, which is taken from a much larger area of country. His gross revenue, taking it, as in the former case, as double the land revenue, would now represent about Rx.138,000,000, against Rx.53,685,007 taken by us from a larger area of country and from a population that is now, owing to our beneficent government and the peace and prosperity due to our sway, at least thrice what it was 135 years ago.

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* Sir William Hunter's "Orissa," vol. 2, p. 40.

Whatever may have been the case under the Mahrattas and under the Sikhs—who appear to have recognised that the landholders had a proprietary right in the soil, but took good care by their taxation and imposition to leave but little, if any, margin for assets to a non-cultivating proprietor—there can be no doubt that the Moghul Government looked upon the land as their own, and on their land revenue as rent. It was this rent, or share in the produce of the land, that they assigned in Jaghire for the support of Court favourites, officials, troops, and for charitable purposes. Looking upon it as rent, as our predecessors in empire did, the only taxation that falls on the land under our sway is comprised in the provincial rates, which are levied for the most part on the land. These are imposed by us on proprietors and tenants to meet charges for local roads, local schools, local sanitary work, local postal arrangements, and in some provinces for village police. They may, therefore, be looked upon as local taxation for local purposes and, as in England, forming no part of the Imperial revenue. The imposition in 1878 for local purposes of this taxation upon land is made the excuse, in the last Indian Progress Report, for the income tax not having been "levied on profits or incomes derived from agriculture." The plea, of course, is absurd. It might as well be urged as an excuse for escaping income tax on the part of the denizens of municipalities who have to pay that tax in addition to their local municipal taxation.

Under the Indian Income Tax Act of 1860 incomes derived from land, as well as from other sources, were made subject to the tax; whereas under the Income Tax Act of 1886 all incomes derived from land were relieved from it. The favour shown to the professional and trading well-to-do classes in India by the latter Act can be judged by stating the other differences between it and the former Act. By the Act of 1886 the minimum income on which the tax could be assessed was raised from Rs.200 per annum to Rs.500; the tax on incomes over Rs.2,000 was reduced from 4 per cent to 2·6 per cent; on incomes under Rs.2,000 derived from salaries, pensions, and interest on securities, from 4 per cent to 2 per cent; and on incomes under Rs.2,000 derived from other sources, from 4 per cent to rates ranging from 1·3 per cent to 2·4 per cent. In his evidence before the India Currency Committee, Sir F. F. Adam, formerly President of the Bombay Chamber of Commerce, made the following statement regarding the Indian Income Tax. He said: "I have always supported it on the ground that it reaches a rich class of people, who really would pay nothing to the State save for the income tax and what they pay on the little salt they use. The bulk of it is derived from the traders and bankers, rich men in all the chief towns."

In England the richer classes have to pay a great variety of taxes from which similar classes of Europeans and natives in India are entirely exempt. Poor rates, income tax on rich tenants and landed proprietors; property tax, legacy, succession, estate, and inhabited house duties; game licences; taxes on carriages and male servants; dog tax; besides a variety of taxes payable under the heads of admission, certificate fees, and licences, &c., levied on the legal and medical professions, auctioneers, bankers, limited liability companies, game dealers, pawnbrokers, &c.; and many of our stamp duties have not, as yet, been imposed in India. Here are numerous sources from which extra revenue for the government of India might be drawn, not mentioning tobacco, sugar, and other sources, which would affect the poor man more than the wealthier classes.

As a rule the people of India are temperate. Only a small fraction of them consume spirituous liquors, and only a minute fraction take opium. As to registration, only non-testamentary documents affecting immovable property are subject to registration. It is not an annual charge. It was imposed to prevent fraud and secure and simplify titles, and may not occur even to a landholder once in his lifetime. It is in no way a poor man's tax. The stamp revenue arises from fees on plaints, petitions, and other documents filed before civil, criminal, or revenue courts, and from duties on commercial transactions recorded in writing, such as conveyances, bonds, cheques, bills of exchange, receipts, and the like. It does not affect a poor man who keeps clear of the law and engages in no written commercial transactions. If a poor man does not purchase imported goods, indulges in no intoxicating drugs and liquors, and keeps free from the courts, his sole taxation consists in that on the small amount of salt necessary for his family and himself, which amounts to only a third of a rupee, or 4⅗d. per head of the population. Such taxation must be considered light, even in the case of the poorest class, the agricultural labourer, who over the greater part of India receives wages partly in money and partly in produce. According to recent returns on wages in India, an agricultural labourer, not including the earnings of his wife and family, receives yearly money wages varying between Rs.164·772 in Burma, and Rs.40·104 in Oude. Artisans, such as masons, carpenters, and blacksmiths, receive yearly money wages varying between Rs.360 in Sinde and Rs.121·248 in Oude, and averaging Rs.175·22 throughout India. The income of the average farmer can be judged from the particulars given on pages 256 and 257.

Mr. Naoroji constantly harps upon the statement of Lord Cromer in 1882, confessedly founded upon uncertain data, that the average annual income per head of the population in India was about Rs.27 per annum. Taking five as the average family, this, even if correct, would give an income to its head of Rs.135 per annum; which, as ten rupees in India go as far with, and represent as much comfort to, a native of India as five pounds do to an Englishman, is equivalent to an income of £67. 5s. in this country. In fact, as has frequently been pointed out by those who know the country, India, with its rural population comprising more than nine-tenths of its inhabitants, can only be called poor in the sense in which all agricultural nations are poor. Sir Richard Temple, who during his stay in India took a great interest in the welfare of the people, and, in the course of his duties, had to closely inquire into and report upon their condition, gave us the advantage of his experience on the matter when he declared in the House of Commons on August 14th, 1894, that, "having spent twenty-five years in India amongst the poorest people and fifteen years (subsequently) amongst the poorest in this country, with that experience he asserted that the people of India are not as poor as the people of England." On another occasion he pointed out that India's whole debt only amounted to a little more than two years' revenue, and of that one-half had been expended on measures (railways, irrigation works, canals, &c.) destined for the material welfare of the people; that the natives of India had the lightest taxation of any people on the face of the earth; and, alluding to the absurd statement of the increasing poverty and increased taxation of the people under our rule, he declared that "we should talk of India with triumph instead of complaining. Instead of talking of the sorrows of the people of India he would talk of their happiness, a happiness unknown in their previous history. The people were growing in numbers, and their agriculture and trade were spreading. Their moral, social, and intellectual *status* was rising rapidly every year under the beneficent influence of the civilisation we were introducing into the country."

People, uninstructed in the real condition of affairs and the past history of India, are liable to consider the groundless statements and vituperation of Indian agitators as worthy of belief, even in face of the direct contradiction given to them by eminent and well-informed retired Anglo-Indian statesmen, such as Sir Richard Temple, Sir Lepel Griffen, and the late Sir George Chesney. Lord Lansdowne remarked in the House of Lords, in reference to the vituperation of Indian agitators, that "The Government of India had to make up its mind to be misrepresented, but as a general rule it could console itself with the reflection that truth might prevail, and that the vituperation is, after all, not very sincere." Truth cannot prevail until it is known. I trust that this article will serve to remove the veil which hides from the view of the general public the truth of the past and present condition and taxation of the people of India. Until this veil is removed we shall still find both Liberal and Conservative statesmen, in order to escape the vituperation of the loud-voiced Indian agitator, pretending that India is taxed up to the hilt, and that the only resource left to meet increased expenditure lies in the raising of the Customs duties. This must harass both British and Indian trade. It must likewise be remembered that such duties fall far more heavily upon the poorer than on the richer classes. Increased trade is all the recompense we obtain for the great benefits we have bestowed on the people of India.

On the Production of Cows' Milk, AND THE Diseases Caused by its Use.

BY J. NIVEN, M.A., M.B., CANTAB, MEDICAL OFFICER OF HEALTH, MANCHESTER.

COWS' milk is the natural and even necessary food of the infant which from any cause is deprived of its mother's milk.

In constitution it differs from human milk, and, therefore, generally disagrees to some extent with an infant, unless diluted or manipulated in such a manner as to bring it into accord as far as possible with that from the mother. This, however, is not a difficult matter.

It is an admirable food for the young child, and is almost a necessary one for many invalids. It is used, of choice, by a large part of the population.

Its chief constituents are fat, proteids, milk-sugar, and water, and any deprivation of essential elements may be disastrous to the consumer. In any ordinary household manipulation which it may undergo it is assumed, as a matter of course, that the fluid which the child receives is ordinary good milk, and all rules for its use are founded on that supposition.

It is, thus, necessary that it should not be in any way tampered with.

Milk from a healthy and well-fed cow is a sweet, fragrant fluid. If taken with sufficient precautions, it can be obtained free from any germs, disease or other. It is, of course, impossible in ordinary every-day manipulations to maintain this absolute purity. But it is possible to supply to the average consumer milk nearly as cheap as that which he now receives, with all its original fragrance and richness, and safeguarded, if not as far as possible, yet to a very great extent, against the possibility of disease.

Now, anyone who is familiar with the ordinary milk of commerce, and who may have had the opportunity of tasting this better class of milk, must be aware that they are two very different articles. It will be explained afterwards how such milk is got, but first of all it is necessary to state in distinct terms that much of the milk supplied to the public is dirty, and therefore bad. Even if it is tolerably palatable, it has lost that fragrance which the best milk should have. Changes have been set up in it by the innumerable bacteria which it contains, which have deprived it of its original freshness. It is well if, by careful straining, the original dirt which was in it when it left the cowshed has been removed to such an extent as to render it inoffensive to look at. In a considerable proportion of cases, however, even in the milk supplied to well-to-do households, the bottom of the dish in which the milk has stood will be found, on careful pouring, to be covered with a blackish layer, composed largely of fragments of cows' excrement.

Nor is the reason of this far to seek. Anyone acquainted with our milk farms knows that townspeople are largely supplied from cows which are very badly housed. The cowsheds are often small, dark, and intolerably close. The cows are covered with manure on their flanks, and the udders are caked here and there with the same material. It is out of the question to expect that cows will remain healthy under such conditions. The cowsheds are dirty. The milker comes to the cow with dirty hands, and adds to the dirt which he detaches from the cow the dirt which he has himself accumulated. He does not hesitate to push the dirty flanks of the cow in the intervals of milking.

In some parts cows are littered with cotton shoddy, which may have been manipulated by consumptive artisans. In others horse manure is employed for that purpose. In either case, the dust from these materials is stirred up by the feet of the cows and is added to the milk.

It is not by any means intended to imply that all milk farms are in this condition, as the writer has seen buildings in the neighbourhood of Manchester which will compare favourably with those to be found anywhere. They are, however, the exception, and the general condition of the cowsheds is intolerably bad.

Milk drawn under such conditions is necessarily richly sown with germs which, in a very brief period, have multiplied to an enormous extent. Now, these micro-organisms are not mainly those concerned in the natural processes occurring in milk, and their multiplication is necessarily at the expense of the proteid elements in the milk, which are split up with the production of new chemical compounds, some of them no doubt possessing injurious properties. Not only so, but the milk may be drawn into cans which have been returned from the dairy in a dirty condition, and which there is not time adequately to clean. It is frequently dirtied in transit by rail. While it is being sold from house to house, you may see the milkman, every time he fills the household vessel, plunging his arm into the can. In the smaller shops it is frequently, one may say usually, exposed to dust and contaminations of various kinds. No attempt is made to control bacterial growth.

It must not, therefore, be supposed that, providing the elements of some well-known and easily recognisable disease such as scarlet fever are absent, the changes introduced into the milk are of a harmless character. If we wish to obtain a wholesome and good milk we must aim at the exclusion of dirt, and at the suppression of bacterial growth. Milk recognisably dirty should be condemned as unfit for the food of man.

How milk may be supplied in a pure state is clearly shown by the operations of the Milk Company of Copenhagen, which has been brought to its present high standard by the indomitable perseverance and the ingenuity of Mr. G. Busck, supported as he has been by a number of the foremost citizens of Copenhagen. In singling out this company it is by no means intended to depreciate the excellent work done by the Aylesbury and other Dairy Companies. The company at Copenhagen was, however, professedly founded on philanthropic grounds, by gentlemen who were willing for the sake of the public to encounter temporary loss, and to forego any large profit, until they were in a position to extend the advantages of a pure milk supply to the population of the city.

The contamination to which our milk is so abundantly exposed has been put in the foreground because it has received too little attention on the part of the public. To this unintentional depreciation of the quality of milk we owe in no small degree not only the inferior quality of our dairy produce, but also much of the disease conveyed by milk.

For example, there is reason to believe that the almost constant presence in large quantities in the milk of the *bacterium coli commune* has much to do with the fatal diarrhœa of infants, to which also we must add the presence of putrefactive bacteria. The presence of the former is explained when we consider the dirty condition of our cows and cowsheds, and the condition in which the milk cans are often, perhaps generally, returned to the farmer.

Not only, however, does milk suffer from accidental contaminations due to ignorance and carelessness, but the amount of dangerous fraud in connection with this necessary article of diet is altogether prodigious. Following on the previous investigations made by the *Lancet* and *British Medical Journal*, an inquiry was instituted in 1895 by the latter paper into the condition of the London milk supply,[*] the results of which are sufficiently striking. This inquiry related to what is termed sophistication, a word which is made to cover the abstraction of cream, the addition of water, the manipulation of new milk with separated milk, and the bacterial growth due to impurities in the milk, which induces changes in the milk to which the term sophistication may very properly be applied. In an editorial announcing the inception of this inquiry it is pointed out that undoubtedly the general and gross addition of water practised twenty years ago has become a thing of the past. Nevertheless, adulteration with water is still practised, cream is still abstracted, and new evils have been added to those already in existence. Since the separation of cream in Co-operative and other large dairies by means of the separator has become general, it has become a common practice to add separated milk to new milk. The more precise knowledge which analysis has placed at our disposal of the variations, we will not call them normal variations, existing in the quality of milk drawn direct from the cow, and the easy tests available for ascertaining the proportion of fats and other constituents in the milk, have made it easy for anyone of ordinary ability to add separated milk to new milk, or for that matter to add water, so that the resulting product will pass recognised standards. In both cases this cruel fraud is attended with the greatest danger to health. The water used in adulterating milk is not rarely taken from wells or other sources which have been exposed to contamination, and the use of which whether for watering down or for washing the milk utensils, has not rarely been attended with fatal outbreaks of disease.

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[*] *British Medical Journal*, 1895, Vol. II., pp. 41, 150, 230, 308, 321, 489, and 496.

The addition of separated milk to new milk is equally dangerous. As is well known, milk is an excellent medium for the growth of the infective germs of several common diseases, among which may be specially mentioned typhoid fever, scarlet fever, and diphtheria. Now, whether these diseases have originated in the cow or in persons who have had to do with the milk, it is manifest that the infections once introduced into the bulk of the separated milk, possessing as they do this capacity of rapid multiplication, may be disseminated by means of the separated milk over a wide area, and such has, in fact, been proved to be the case.

The manufacture of condensed milk has, in recent years, become a great industry, and it is, therefore, a matter for much concern to find that a large number of the brands contain nothing but separated milk, while others contain only a small proportion of new milk. In some of these the absence of cream is so inconspicuously announced that it is liable to be altogether overlooked. Even when the fact that it is made from separated milk is stated, the word "skimmed" is generally used, which is utterly misleading. There is naturally with none of them the information given that the condensed milk is unfit for the use of infants, its sole employment being simply a form of starvation. But parents who would never dream of giving their children skimmed milk are not at all unlikely to give them such "condensed milk" under the belief that it is wholesome. It is, therefore, well that the *British Medical Journal* should draw attention pointedly to this danger.

The magnitude of the sophistication carried on in milk is shown by the results of analysis of fifty samples of milk collected by trustworthy persons for the commission of the *British Medical Journal* in the poorer districts of Westminster, Marylebone, Lambeth, and Battersea. Of these only sixteen were reported, on analysis, as being of genuine composition; twenty-four were found to be more or less sophisticated by the addition of water or the abstraction of fat, or both, even where the calculations of the results were based on the lowest quality which it is possible to adopt; seven were sophisticated upon the basis of a somewhat higher but perfectly fair standard in regard to fat; and three, while otherwise of genuine composition and fair quality, had been tampered with by the admixture of a boric acid preparation, eleven of the otherwise sophisticated samples having also been found to contain boric acid.

The impression produced by this inquiry is but little modified by the Annual Reports of the Local Government Board, as will be seen by an extract from the report for 1894–95:—

> Of the 39,516 samples analysed, no less than 16,305 were of milk, and of these 1,868, or 11½ per cent, were reported against. Many analysts, however, state that they have strong suspicion that in many cases good milk is watered down to the very verge of what is passable.
>
> It is satisfactory to note that in many large towns the number of samples of milk reported against is, as compared with the number analysed, but small. In Salford last year the proportion of samples found to be adulterated was 1·7 per cent; in Cardiff, 3·2; in Swansea, 4·1; in Manchester, 4·7; while in 32 large towns of the Registrar General's Returns, taken together, it was 7·2.
>
> In London, however, over one-fifth of the samples examined were reported against. In 1882 the proportion adulterated in the eight towns of Manchester, Liverpool, Birmingham, Leeds, Sheffield, Bradford, Bristol, and Salford was 22·6 per cent; but in 1894 the proportion had fallen to 6·7 per cent; while in London the proportion had only been reduced in the twelve years from 24·5 to 21·1 per cent.
>
> Of the entire number of 1,868 samples of milk reported against, 1,235 were the subject of legal proceedings; 93 cases were dismissed, 31 were withdrawn; in 58 cases costs only were paid, while in the remaining 1,053 cases penalties amounting in all to £2,133. 2s. 5d. were imposed. There were ninety-seven fines of £5 each, twelve between £5 and £10, thirty of £10, seven between £10 and £20, and three of £20.

It is thus abundantly manifest that, although the extent of sophistication may vary in one place and another, the general amount of it throughout the country must be enormous, and the injury to health, or, in other words, the disease and deterioration entailed correspondingly great.

To return to the inquiry of the *British Medical Journal* Commission.

Samples were taken across the counter for bacteriological examination, and phenol added to check the growth of liquefying organisms. Sown on gelatine and incubated at 21 – 22° C, these revealed an average content of 500,000 per cubic centimetre. As regards the nature of the micro-organisms present, 90 per cent consisted of the *bacillus coli communis*, derived chiefly from the soiled cow and its surroundings. This was present in all the samples.

In regard to this bacillus, Mr. Sydney B. Rowland makes these observations :—

> It has been clearly shown that many of the milder forms of disease are chiefly dependent on the presence of *abnormal quantities* of the *bacillus coli communis*. It will be sufficient to mention, among many others, its determining action in many cases of *cholera nostras* (Gilbert and Girode), *cholera infantum* (Lesage), *cholecystitis* (Charrin and Roger), &c.
>
> We insist that the quantity of *bacillus coli communis* present in London is dangerously large, both in itself and for that which it represents and portends, and that means ought to be taken to reduce the same.
>
> Liquefying organisms were also present in all the samples. Their presence in milk must mean one of two things, either direct contamination with putrefying matter (stale milk, such as might occur in improperly washed dairy utensils, &c.) or needless exposure to an atmosphere containing particles of decomposing matter. Both of these possible channels of infection are such as might, and most certainly ought to, be successfully guarded against.
>
> *Bacillus fluorescens* was also invariably present. Its presence may be taken as presumptive evidence of added water.

When, now, we come to consider the disease caused by milk, it becomes evident that the amount of disease not directly traced to any particular milk supply or to any particular partaking of that article of food, but caused by fraudulent tampering with the constituents of the milk or by want of care and cleanliness in its treatment and distribution, probably infinitely outweighs anything of which we have clear and demonstrated evidence. To these causes we must assign a considerable share of the deaths or ruined frames which are ascribed in ordinary parlance to diarrhœa, consumption, wasting, debility, convulsions, and so forth. The child's body is starved and rendered rickety or made unable to resist the assault of tuberculosis or other diseases by the deprivation of fat, the digestive organs are injured by the abundant filth which is allowed to enter the milk, especially in the cowshed, or it is poisoned by putrefactive and other toxic processes set up in the milk by dirty hands, dirty cans, and other pollutions of a like nature. These effects are produced on a vast and generally accepted scale. But they are even more avoidable than the transmission of specific diseases.

Nevertheless, there are certain diseases which have been clearly proved to have an intimate relation to infected milk, and the relations of which to that food open out important questions.

These are the specific fevers, scarlet fever, diphtheria, and typhoid fever, to which may be added outbreaks of an indeterminate nomenclature but of a clearly marked character, tuberculosis, foot and mouth disease, and thrush.

As a rule the connection between milk and one of the fevers mentioned is well marked and easy to trace in a general way. A sudden increase occurs of persons assailed by the disease, or, as it has been termed, there is *an explosion* of the particular fever. This is, as a rule, of a limited extent. On careful inquiry it is found that the one link between the households attacked is that they take their milk from one source of supply, in the great majority of instances, and that otherwise they have nothing in common which could have caused the occurrence. It is inferred that the milk has been the means of carrying the disease, and further inquiry is directed to ascertaining how infection has reached the milk.

A large number of these milk outbreaks are now on record, although, with the exception of the outbreak of typhoid fever in 1857 in Penrith, recorded by Dr. M. W. Taylor, published records of these occurrences date from the year 1870.

The careful inquiry of that indefatigable investigator, Dr. Ballard, into an outbreak of typhoid fever at Islington in 1870 gave a great impulse to the study of milk as a propagator of infectious disease, and already in 1881 Mr. Ernest Hart was able to present to the International Medical Congress an account of fifty epidemics of typhoid fever, fifteen of scarlet fever, and seven of diphtheria, disseminated by infected milk.

Since then every year has added to the list, so that we now possess a great body of valuable information on the subject.

In addition to the general characters mentioned above, there are others which strengthen the conclusion that the disease has been due to a particular milk supply. For example, the persons attacked have been in an undue degree children, servants, and women, while adult men, who use less milk, have escaped comparatively lightly. In many instances particular persons, who alone in a household used the contaminated milk, have been singled out for attack. Families using the infected milk have been picked out for attack, while their neighbours, with a different supply, have been unaffected.

People who used much milk have suffered to a greater degree than those who used comparatively little, so that those in good circumstances have been most severely affected.

In fact, in these epidemics, especially in those investigated by the Inspectors of the Local Government Board, a multitude of corroborative facts have been accumulated which at once illustrate and clinch the general conclusion.

Now, as regards the mode in which infection reaches the milk,* the remarks of Mr. Ernest Hart in reference to the epidemics of typhoid fever of which he gives a summary have not lost their significance at the present time. He says:—

> As regards typhoid fever, the most common way in which the poison has been observed in those epidemics to reach the milk is by the soakage of the specific matter of typhoid excrements into the well water used for washing the milk cans and for other dairy purposes, and often, *it is to be feared*, for the dilution of the milk itself, for which, in official reports, "*washing* the milk cans" has become a convenient euphemism advisedly employed to avoid raising unpleasant questions.
>
> In twenty-two of the fifty epidemics of typhoid fever recorded this is distinctly stated by the reporters to be the case, and in other cases it was more or less probable.
>
> In other instances the milk was exposed to contamination directly from the cases of typhoid fever.
>
> A case is recorded of the milk cans being washed with the same dish cloth as was used for the patients suffering from fever at the farm. In another case there is a story of infected body-linen washed in the place used for dairy operations, and of a subsequent considerable outbreak of enteric fever amongst the customers.
>
> The milk cans are often taken into the house while disease is present in it.

It is facts such as are presented by these epidemics which attach to the adulteration of milk with water its peculiarly grave character, and which render it imperative to adopt special precautions in its production, storage, and distribution.

The gross pollution of a number of the wells revealed by these occurrences is by no means a thing of the past, and we are not yet at an end of outbreaks of typhoid fever caused by contaminated water used to wash milk cans or to adulterate milk.

As regards the conveyance of scarlet fever by milk, the evidence is equally conclusive, but the mode of infection of the milk is not so clear. It would appear, in the majority of cases, that the milk must have become contaminated by the indirect conveyance of infection from previous cases in the family of the dairyman. Assuming that this was the case, it is impossible to escape the conclusion that the multiplication of infection in the milk must have been exceedingly rapid, and, as a consequence, we must assume that milk may very easily be dangerously infected through one of those numerous attacks of slight scarlet fever, which is known only as a passing sore throat, in any of those persons who handle the milk. In some of the instances no evidence was obtained of any previous source of infection.

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* Transactions of the International Medical Congress of 1891, page 492.

As regards milk-outbreaks of diphtheria, there was still slighter evidence of connection with previous illness at the farm. In only one of the seven analysed by Mr. Ernest Hart was diphtheria clearly shown to have been present at the farm.

*As early as 1878, the Medical Department of the Local Government Board became impressed, in the case of an outbreak of diphtheria in Kilburn and St. John's Wood, with its ignorance of the methods by which milk obtained infective power. It was possible to assert, in this instance, that none of the agencies by which milk, after being taken from the cow, may become infective, could with any shadow of probability have been in operation.

An epidemic of scarlatina in St. Giles and St. Pancras, in 1882, was the subject of investigation by Mr. Power for the Board; and the disease was here distributed with a milk service derived from a Surrey farm. In this case two facts could be affirmed, the one that a cow recently came into milk at this farm which had been suffering from some ailment, seemingly from the time of her calving, of which loss of hair in patches was the most conspicuous manifestation; the other that there existed no discoverable means by which the milk which had coincided with scarlatina in its distribution could have received infective quality from the human subject.

I will now quote in continuation of this subject from Dr. Klein's article in Stevenson and Murphy's treatise on Public Health.

> The Medical Department of the Local Government Board has from these facts drawn the conclusion that distrust must be placed on the universally accepted explanation that milk receives infective properties directly by human agencies, and further that the question of risk from specific fouling of milk by particular cows suffering, whether recognised or not, from specific disease was seen to be arising. This view received striking confirmation and proof by a report of an outbreak of scarlet fever that occurred at the end of 1885 and the beginning of 1886 in the north of London, and was investigated by Mr. Power. His report is published *in extenso* in the Report of the Medical Officer of the Local Government Board for 1886; and we will here give the substance of it. Mr. Wynter Blyth, Medical Officer of Health for Marylebone, had in December, 1885, observed a sudden outbreak of scarlet fever in his district to be associated with the distribution of milk coming from a farm at Hendon, and had found reason to believe that a similar prevalence of scarlatina had occurred at the same time in other parishes in and near the Metropolis which were furnished with milk from that source. Mr. Power, on a more extended inquiry, found that a similar prevalence of scarlatina had occurred about the same time in other parishes in and near the

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*Fifteenth annual report of the Local Government Board, 1885–86; Medical Officer's Supplement, page 5.

Metropolis which were furnished with milk from the same farm. After careful inquiry, Mr. Power could with certainty exclude any contamination of milk from a human source, and say that nothing of a kind known as "sanitary" conditions could have had any concern with the infectivity of the milk. Mr. Power showed conclusively that only certain sections of the milk supplies of this farm, and finally only certain cows from which these sections of milk were derived, had any relation to the observed results. "In the end," says the Medical Officer, "he has demonstrated, beyond reasonable doubt, the dependence of the milk scarlatina occurring from day to day during December on a diseased condition of certain milch cows at the farm, a condition first introduced there in the previous month by some animals newly arrived from Derbyshire; and he finds strong circumstantial evidence for believing that the latter phenomena of this dependence were brought about through the extension of the diseased condition of one set of animals to another set, after the fashion of infection." Now, this disease as it presented itself in some of these Hendon cows consisted in the presence of sores and scurfiness in different parts of the skin, with loss of hair in patches, an eruption leading to the formation of a sore covered with dark brown scab or crust on the udder and teats, and a visceral disease, notably of the lung, liver, kidney, and spleen, which, although milder in character, very much resembled the visceral lesions occurring in cases of human scarlet fever. By experiment it was shown that the matter of the eruption of the udder is possessed of infective power, inasmuch as on inoculation into the skin of calves the same eruption is reproduced.

Subsequent investigations served to strengthen the inference drawn from this important inquiry, which, however, has undergone severe criticism, and requires to pass through the usual ordeal of criticism and repetition.

In the same manner investigations of outbreaks of diphtheria at Yorktown and Camberley in 1885, at Barking in 1888, and at Croydon in 1890 pointed very strongly to the probability of the disease being derived from the cow.

Dr. Klein's subsequent investigations show that cows can be infected by inoculation with the bacillus of diphtheria, and that such infection is followed by the occurrence on the udder of a characteristic eruption which contains the micro-organism proper to the disease.

It is important also to observe that cats suffer naturally from a disease characterised by lung disease and emaciation, which Dr. Klein considers that he has shown to be identical with the disease which can be induced in that animal by inoculation of matter derived from cases of diphtheria in man.

These observations require to be confirmed and extended. But, in the meantime, it may be safely said that they impose fresh duties on sanitary authorities as regards the inspection of milch cows, while supplying a powerful stimulus to the close observation of disease not only in the cow, but in our domestic animals.

The possibility is also suggested of typhoid fever being caused by disease in the cow.

Other outbreaks of acute milk infection have also been recorded, as, for example, the epidemic of sore throat reported by Dr. G. Sims Woodhead and Mr. J. M. Cotterill to the Edinburgh Medico-Chirurgical Society on June 6, a form of illness which was not identified with either scarlet fever or diphtheria. This was clearly traced to the milk supply, and on examination of the cows Dr. Woodhead found that most of them showed unmistakable signs of cowpox in the scab stage.

In the *Lancet* of January 18th, 1896, the writer reported an outbreak of milk infection which was apparently caused by a cow with garget, a name applied to any extensive inflammatory condition of the udder, and which no doubt covers a number of different diseases. The principal symptoms in this instance were diarrhœa, sickness, and abdominal pain. There was no death. Other acute infections apparently due to diseased conditions in the cow have also been reported.

The disease, however, to which the greatest amount of attention has been recently accorded is tuberculosis.

There can be no reasonable doubt that consumption is widely spread by the milk of tuberculous cows. It is true that the connection has been clearly traced only in a very few instances. Nor is the reason far to seek. The rapidity with which consumption, of whatever origin, develops in the individual varies greatly, depending as it does to a large extent on individual resistance to the disease. There is, thus, no explosion of infection such as we have seen to occur in the case of zymotic diseases. By the time the disease has developed, the stock in the infecting cowshed may have been changed. Before charging the milk at all, it is necessary to show by a skilful *post-mortem* that the disease has started in the bowel.

Nevertheless, we may safely assume that the disease is being scattered wholesale in this manner.

The steps of the reasoning may be thus stated. Children are not tuberculous at birth, except in a quite insignificant number of cases. Vast numbers of children die of consumption of the bowels, lungs, brain, &c., and the observations of Dr. G. Sims Woodhead, which might with profit be extended, show that in a large proportion of these cases the disease actually starts from the bowel. It has, therefore, been conveyed by what the child has swallowed. Now, the one well-known source of tuberculosis produced by food—at all events, in those instances where there are no other cases of tuberculosis in the household—is milk.

Moreover, there is ample evidence that, under special circumstances, the milk from a tuberculous cow is dangerous in the highest degree. We cannot do better, to show this, than quote the report of the recent Royal Commission appointed to inquire into the effect of food derived from tuberculous animals on human health.

Premising that the following are the tests for tuberculous matter alluded to in the text—

1. Microscopic examination;
2. Feeding of test animals with the material;
3. Inoculation of the same with the suspected substance;

we give the following extract:—

59. Applying to the milk furnished by the seventeen cows the three tests before described as being available for the detection of tuberculous matter, Dr. Martin obtained the following results from his different groups of cows:—

(*a*) The eight tuberculous cows, which had healthy udders, showed him no tubercle bacilli whatever in the milk of any one of them: forty-one test animals fed with their milk remained perfectly free from tuberculous disease; twenty-eight test animals inoculated with their milk also remained quite free from tuberculous disease.

(*b*) The two tuberculous cows which had udder disease, found *post-mortem* not to be tuberculous in nature, showed him no tubercle bacilli in their milk. Three test animals fed with their milk, and fourteen other test animals inoculated with their milk, remained, all of them, perfectly free from tuberculous disease.

(*c*) Of the five tuberculous cows which had udder disease, found *post-mortem* to be of tuberculous nature, three showed him tubercle bacilli in their milk. He could not find tubercle bacilli in the milk of the other two. With milk from the three cows fifteen test animals were fed, with the result of producing tuberculosis in every one of them. With milk from one or other of the same three cows thirteen test animals were inoculated, with the result of all thirteen acquiring tuberculous disease. The milk of the fourth cow (one of those which had not shown tubercle bacilli) was used to feed ten test animals, and produced tuberculosis in four of them. Inoculated into six test animals, all of them became tuberculous. The milk of the fifth cow (in which also no tubercle bacilli had been seen) was used to feed two animals, but without result. Yet when it was used to inoculate two other animals, both of them acquired tuberculous disease.

(*d*) It remains to note these tests as applied to the milk of the two cows found after slaughter to be suffering under another disease, but not tubercle. The results were: No tubercle bacilli found in the milk of these cows; inoculated into seventeen test animals, it did not produce tuberculosis in any of them; milk from one of the cows, however, in some test animals gave rise to various abscesses.

60. According to our experience, then, the condition required for ensuring to the milk of tuberculous cows the ability to produce tuberculosis in the consumers of their milk is *tuberculous disease of the cow affecting the udder.** It should be noted that this affection of the udder is not peculiar to tuberculosis in an advanced stage, but may be found also in mild cases.

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* We have been told by various observers that animals have become tuberculous after being fed with milk from tuberculous cows having no appreciable disease of their udders; evidently, if this does occur, it can be but seldom.

ON THE PRODUCTION OF COWS' MILK,

61. Further, with reference to this disease, Dr. Martin writes: "The milk of cows with tuberculosis of the udder possesses a virulence which can only be described as extraordinary. All the animals inoculated showed tuberculosis in its most rapid form" (sec. 148, p. 39). Dr. Woodhead, investigating, for his own purposes, the effects of unboiled milk, speaks in similar terms of this virulence of milk derived from tuberculous udders and inoculated into test animals. The two observers had occasion to use milk from a cow that had tuberculous disease in one quarter only of the udder, and they found the milk from the other three-quarters to be perfectly harmless on inoculation; but the mixed milk taken from the four teats was to all appearance just as virulent as the milk from the diseased quarter. Butter, skimmed milk, buttermilk, obtained from the milk of a cow having tuberculous udder (by the usual processes, but with complete precautions against accidental contamination of articles used in the manufacture) all contained tuberculous matter actively injurious to test animals.

62. And not only this virulence, but the rapidity with which milk can obtain its harmful quality, attracted Dr. Woodhead's attention. He reports: "A most important point is that the spread of tubercle in the udder goes on with most alarming rapidity; this I was able to observe in the cows constantly under observation, but I have also noticed on several occasions during the interval between fortnightly inspections carried on along with a veterinary surgeon that the disease has become distinctly developed. It may be, of course, that the early evidence has been overlooked at the previous inspection, but, whether this is the case or not, the spread of the disease was so rapid as to afford very good ground for alarm. The very absence of any definite sign in the earlier stage is one of the greatest dangers of this condition" (sec. 104, p. 143). And both Dr. Martin and Dr. Woodhead insist that no tuberculous animal of any kind should be allowed to remain in a dairy.

63. The withdrawal from dairies of every cow that had any disease whatever of her udder would form some approach to security against the serious danger incurred by man from the use of tuberculous milk, but it would not be an adequate security. The presence in a dairy of a tuberculous cow, as Drs. Martin and Woodhead have shown, is a decided source of danger to the public, especially having regard to what we have learnt respecting the rapid development of tuberculosis in the udder, and the degree of danger to milk consumers incurred by the invasion of the udder in tuberculous cows.

64. It follows from the observations here recorded that it is of supreme importance to the consumers of milk that the existence of any tuberculous disease of the udder should be ascertained without delay. Now, there is no difficulty whatever about recognising the presence of some abnormal condition in a cow's udder, and the presence of such condition—whatever it be—demands that the judgment of a responsible expert should forthwith be obtained about its nature; unless, indeed, the owner prefers to slaughter the cow without delay. If the expert finds tubercle bacilli in the milk, the cow has dangerous tuberculosis of the udder. If he does not find them, he may apply the further test of inoculating some susceptible animals with the milk, and thereby learn the nature of the udder disease. By this test he will very rarely be misled. Obviously the cow must be in seclusion, and every particle of her milk must be treated as highly dangerous, during any delay that can be be permitted for diagnostic purposes, and until the disease has been proved not to be tuberculosis.

It is difficult to say what proportion of the milch cows throughout the country is tuberculous, but if we say 20 per cent we shall, on MacFadyean's estimate, be within the mark. Tuberculosis of the udder is, fortunately, not a common condition, though it cannot be described as rare.

Another disease is asserted to have been conveyed by milk from an affected cow, viz., foot and mouth disease. This occurrence is not so common as to require particular description.

Thrush, again, is produced by milk which has been invaded by *oidium albicans*.

From all this it will be seen that milk, which is an absolute necessity in the artificial nourishment of children, is responsible for a vast amount of disease, both directly and indirectly, and we may now profitably proceed to inquire what are the steps by which these widespread evils are to be encountered.

In the first place let us consider what is to be hoped for from official control.

It must be admitted that, in this direction, comparatively little has been effected, not so much from want of machinery as from failure to put it in force.

The existing machinery consists partly of provisions under the Food and Drugs Act, partly of provisions embodied under the Contagious Diseases (Animals) Acts.

The adulteration or sophistication of milk, however, is but very imperfectly dealt with under the Food and Drugs Act, mainly for two reasons. In the first place, its provisions are very partially enforced; in the second place, much difficulty has been experienced with regard to the standard to be aimed at, which has been pitched by Somerset House very low. The result of this, no doubt, has been to lead to a systematic lowering of the quality of milk, whether by the addition of water or separated milk, or by the abstraction of cream, to such a point as to just escape the clutches of the law.

In the case of milk, however, any adulteration must be regarded as dangerous for reasons already given, and the question is how it is to be prevented.

The plan originated in Manchester, and now followed in other towns, of checking the results of analysis by means of a sample taken direct from the cows which are said to have yielded the defective milk, is unquestionably a most proper one to follow, and no sufficient arguments have been brought forward against it.

It is manifest, moreover, that by this means the standard could be quite safely raised to 3·5 per cent of fat, since, if a milk not yielding this amount is found to be decidedly below the morning and evening milks taken direct from the cows, it must have been in some way tampered with, other conditions remaining the same.

Then, again, the Cowsheds, Dairies, and Milkshops Order of 1885 makes certain provisions relating to infectious disease, the scope of which is to throw on the cowkeeper, dairyman, or purveyor of milk the duty of not himself handling cows or milk vessels while in an infectious condition, or allowing any of his employés to do so under the same circumstances. It provides against keeping swine in a cowshed. It also makes some provision for the proper keeping of cowsheds, dairies, and milkshops. As regards cowsheds, these are couched in very general terms, and could not be easily enforced. But it also confers on local authorities the power to make regulations defined thus :—

(*a*) For the inspection of cattle in dairies.
(*b*) For prescribing and regulating the lighting, ventilation, cleansing, drainage, and water supply of dairies and cowsheds in the occupation of persons following the trade of cowkeepers or dairymen.
(*c*) For securing the cleanliness of milk stores, milkshops, and of milk vessels used for containing milk for sale by such persons.
(*d*) For prescribing precautions to be taken by purveyors of milk, and persons selling milk by retail, against infection or contamination.

Under these regulations, a local authority may obtain fairly ample powers for the effectual cleansing and ventilation of their own cowsheds.

Section 15 of the Cowsheds, Dairies, and Milkshops Order is highly important, and, if adequately enforced, should prove a great boon. It runs as follows :—

> If, at any time, disease exists among the cattle in a dairy or cowshed, or other building or place, the milk of a diseased cow therein
> (*a*) Shall not be mixed with other milk ; and
> (*b*) Shall not be sold or used for human food ; and
> (*c*) Shall not be sold or used for food of swine or other animals unless and until it has been boiled.

The Infectious Disease Prevention Act, 1890, Sec. 4, gives to the Medical Officer of Health, accompanied by a veterinary surgeon, power to enter upon and inspect "a dairy" in another district, as well as the animals therein, provided he is in possession of evidence that any person in his district is suffering from infectious disease attributable to milk supplied within the district from the dairy situate within the district, or that the consumption of milk from such dairy is likely to cause infectious disease to any person residing in his district. He must, however, be authorised in that behalf by an order of a Justice of the Peace having jurisdiction in the place where such dairy is situate. On sufficient evidence his sanitary authority may prohibit the sale of milk from an infected farm until the cause of infection has been removed.

Now, these provisions for the protection of the public have hitherto proved unavailing. In the great majority of country districts the facilities, such as they are, for improving the quality of the milk, are unused. Supposing that a large town proceeds to set its house in order, so far as cowsheds are concerned, it has no power to interfere with the farms outside its boundary which may contribute seven-eighths of the milk consumed within its borders, and remain, largely, in their primitive condition of untended disorder. Supposing, even, that the grosser filth was removed from our milk, it would still continue to be loaded with germs and their pernicious products. We have proved, if not altogether helpless, yet quite unable to cope effectually by administrative means with the evil. Moreover, the law relating to infection carries with it, very often, its own means of overturn. When a farmer knows that the discovery of infectious disease means pecuniary—it may be heavy pecuniary—loss, he is likely to, and no doubt not rarely does, conceal its existence. In fact, the present arrangements for protecting the public have generally failed. This result of administrative action has been quite as marked abroad as at home, and an altogether new mode of attacking the difficulty has recommended itself to thinking minds, especially in foreign countries.

It is now eighteen years ago since Mr. G. Busck, of Copenhagen, conceived the idea of displacing, through private enterprise, the insanitary fluid sold as milk in distillers' shops by a pure good milk of high quality. With unwearied energy and patience, and by the exercise of the greatest ability and ingenuity, he has succeeded in his enterprise. . He has had, it is true, behind him a number of the most eminent citizens in Copenhagen, some of them men of European reputation.

He has made it his object to place at the disposal of the public, at moderate prices, milk which has been, as far as possible, guarded from all contamination and infection.

From an insignificant concern at its inception the company has now arrived at the point that it has at its disposal over 5,000 cows, from fifty-seven of the best farms procurable in Zealand.

The writer has recently had the opportunity of using milk which he has bought at random in the company's shops in Copenhagen, and can testify that such milk is rarely procurable in this country for fragrance.

The means by which this is achieved is as follows :—

The farms are, as has been stated, the best procurable in Zealand. They lie, many of them, at a distance from the city, the only limitation being that they must not be above four miles from a railway station.

It is a part of the compact with the farmer that they are kept scrupulously clean. The same is true of the cows. The milking has to be done with clean hands.

The cows must be free from disease.

Any infectious disease occurring in the family of the farmer, or amongst his employés, must be at once reported, when the milk will be paid for as usual, though withheld from the stock. There is thus—as with the Aylesbury Dairy Company—no inducement (but the reverse) to conceal infectious disease.

The milk, when drawn from the cows in the morning, is at once placed in a tank containing ice and water, in which it stands till afternoon, when the cream is skimmed off. This leaves a half-skimmed milk which still contains 1 per cent of fat.

The evening's milk when drawn is at once cooled down by a Lawrence cooler (through which ice water is flowing) to a temperature of 41° F.

The ice is collected by the farmer in winter and stored either in an ice house or under turf.

In order to prevent undue rise of temperature the milk and cream must arrive at the station of departure at a proper hour in the evening. It is received into trucks containing boxes charged with ice, and is thus enabled to reach the company's premises at a temperature not exceeding 50° F.

Before leaving the farm, the cans, which are of a practical shape, are fastened down and sealed in such a manner that they cannot be tampered with on the way.

On arriving at the Milk Factory in Copenhagen the cans are opened and the milk and cream are tasted by expert women, to ensure that no impurity has reached it, and that it possesses a good flavour.

The good flavour of the ordinary milk is caused by a prescribed course of feeding, which the farmer is bound to observe, while the children's milk is obtained by a still more carefully prescribed course of feeding and is got from the best cows.

When the cans have been opened, those containing ordinary sweet milk and half-skimmed milk are plunged into tanks containing ice and water to wait until the children's milk and the cream have been bottled.

These are first filtered through a gravel filter containing two thicknesses of gravel, and received into a large vessel in a room where no one is working, to avoid dust getting into the milk. The milk is then drawn by a pipe passing through a party wall into a series of taps in the bottling room. Here the bottles are filled, the contents being adjusted to a mark, and corked by a most ingenious machine. The cork is then tied on, and the knot is sealed by a bead of lead slipped on to the string and stamped with the company's stamp.

The cream bottles have marks cut on the glass showing the quality of the cream which they contain.

The workpeople at the factory are clad in white overalls.

Having been sealed, the bottles are then put into cases and covered with pieces of ice.

As regards filtering, the new milk and half-skimmed milk are treated in the same manner.

The filtering gravel is thoroughly cleaned every day with hot water and soda, steamed under pressure, and then any dirt is taken out of it by a machine.

The bottles after use are washed with soda and water and then brushed out with a rotating brush revolving in water which has been run into the bottle.

The bottles when washed are placed on racks, upside down, to dry.

The milk cans are thoroughly cleansed before being returned to the farmer. They are first rinsed out with cold water, then with lime water, finally they are sterilised by passing steam into them, after which they are placed on racks, mouth downwards, to dry.

The cans used in delivering milk are treated in the same manner.

When the milk cans reach the farmer he rinses them out again with cold water, and stands them mouth downwards to dry till they are required. Needless to say, this requires that the water supply shall be pure.

After the ordinary sweet milk and half-skimmed milk have been filtered they are drawn into cans holding each about eleven gallons, which are then placed in vans to be presently taken round the city or conveyed to shops. The vanman cannot again touch these cans after they have been placed in the vans. They are admitted by side doors, which are then closed and sealed, only the taps sticking out.

Whether it be bottles or cans which are carried round in the vans, they are kept cool in summer by ice placed in the vans.

In fact, every precaution which ingenuity can suggest has been employed to ensure the utmost cleanliness possible in the milk, and it is guarded by ice, from leaving the cow to reaching the consumer, against undergoing bacterial growth.

Seven veterinary surgeons in the pay of the company examine the cows at each of the farms, once a fortnight, and report. They also report on the fodder, condition of the cow-sheds, dairies, and so forth. Surprise visits from a dairymaid in the employ of the company also secure the cleanliness of the dairy and the completeness of the arrangements for cooling the milk and keeping it sweet.

The generous and wise compact made with the farmers is the best security against infection from the farm, and the staff at the factory are looked after by medical men. They, also, get paid when absent owing to the occurrence of infectious disease in their families, so that they have every inducement at once to report such an event.

The most surprising part of the business is that the milk and cream, after all these elaborate arrangements, are cheaper than much of the milk which we use. Nor is this owing to the price which is given to the farmers. These receive about 7d. per gallon for the best children's milk, which is sold at 1s.

A tumblerful of thick or best cream costs 3½d.; of second class cream, 2d. The same quantity of sweet milk costs about ¾d., of half-skimmed milk less than ½d.

Now, I have not yet been able to discover what there is that can possibly prevent a similar enterprise from being equally successful with us. I am aware of the various difficulties, but they are such as the Copenhagen Milk Supply Association have successfully overcome.

One element, indeed, in the success of this great enterprise it may be difficult to find, namely, another man who will emulate the devotion, ingenuity, and care which Mr. Busck has so freely given for the benefit of his fellows.

He has succeeded in entirely altering the character of the milk supply in Copenhagen, not merely by the excellent quality of the milk which the company with which he is connected supplies, but from the compulsion put on the other vendors of milk to show an improvement in their wares.

In putting forward this company for imitation, the writer has no intention of depreciating the good work which has been done by sundry companies and societies in this country, although they do not, with rare exceptions, protect the milk supply to the extent which has just been described.

We may, in conclusion, usefully consider what steps may be profitably taken to remove the reproach and danger now attaching to our milk supplies.

It is probable that the end will best be reached by a combination of private enterprise with administrative effort. If successful companies were formed for the supply of milk on similar lines to those followed by the Copenhagen Milk Company, they would make it much more difficult to put into the market an inferior article not guaranteed by similar securities. Perhaps, in the first instance, more is to be hoped from this course than from Governmental action.

The ends, however, are the same, and they require in the first place that milk should be supplied from healthy cows, and in an absolutely fresh and clean condition.

As regards a clean condition of the milk, that is not to be looked for except the farm buildings and the cows are kept clean. As regards the cows, they will not remain healthy in dark and ill-ventilated cowsheds. It is, therefore, a primary necessity that the cowsheds should be rendered structurally fit for the use to which they are put.

The proportion of tuberculous cows is high, and the problem of removing them from the stock is a difficult one. Probably as good a way as any would be to adopt Professor Bang's plan of gradual elimination described in Nocard's work on "The Animal Tuberculoses, and their Relation to Human Tuberculosis," translated by Dr. Harold Scurfield, published by Bailliere, Tindal, and Cox, 1895. At the least, all calves should be tested regularly with tuberculin, and the new stock kept free from the disease.

To render this plan permanently useful, however, the cowsheds would have to be improved, and tuberculous persons would require to be prevented from attending on the cows.

The cows and cowsheds require to be kept thoroughly clean.

The dairy, also, should be scrupulously clean.

No water which is not perfectly secure against pollution should be used to rinse cans with.

All sanitary authorities may, if they choose, make regulations under which they can compel these conditions to be observed, and it would be to the general welfare if the Local Government Board made such regulations compulsory, and, as far as possible, operative. There might be for every district of a sufficient size a veterinary surgeon appointed, whose duty it should be to see that the necessary conditions as regards the health of the cattle and the purity of the milk were observed. It should be his duty to prepare plans showing the position of the various farms inspected by him, and the number of cows on the farm, so that an officer from the Local Government Board might from time to time pay surprise visits.

Neglect to carry out reasonable requirements should entail inability to sell milk under a heavy penalty.

As regards the adulteration of milk with water or separated milk, or the abstraction of cream, it is universally admitted that the penalties at present inflicted are too small, and are utterly inadequate to prevent these practices. Nor is it easy to see how the prevailing indifference to these frauds is to be got over. Perhaps a step forward might be taken if it were enacted that, on clear conviction, the fine for a second offence on the part of a farmer should be not less than £20 or more than £100, and that on a third clearly-proved offence he should be prohibited from supplying milk.

As regards the retailer of milk, it would be necessary on a third offence, not only to prohibit him from the further sale of milk, but to add a heavy pecuniary fine, so as to make the punishment adequate.

The quality of the milk put on the market can easily be determined with sufficient accuracy by the farmer and the dairyman, and every farmer and dairyman ought to have a Babcock or similar apparatus, a specific gravity instrument, and a thermometer.

We have seen that, as regards the farmer, the Manchester plan settles with sufficient nearness the amount of adulteration which has been practised.

But, adulteration or no adulteration, the quality of the milk has no right to be inferior, and anything below 3·5 per cent of fat and 8·5 of solids not fat should lead to an examination of the quality of the milk as it comes from the cow, and to an investigation of the health of the cows from which the inferior milk is supposed to be drawn, so that milk from an inferior source might be rejected.

In the prevention of infectious disease good would be effected if the plan pursued by the Copenhagen Milk Supply Company and by the Aylesbury Dairy Company were followed by sanitary authorities—that is, if, on the occurrence of infectious disease at a farm, or at a dairy devoted exclusively to the sale of milk, compensation were paid by the local sanitary authority for the milk withheld from sale until the Medical Officer of Health of the district in which such farm or dairy is situated gave a certificate that the premises and utensils could be regarded as free from infection.

Special precautions require to be enforced to maintain the cleanliness and purity of milk.

It should be a penal offence for a dairyman to return to a farmer cans not thoroughly cleaned. The cans to be used for the reception of milk at the farm should, at a stated period before the regular milking time, be required to be placed upside down, clean and dry, on a rack situated on some part of the farm where they might be assumed not to receive pollution, and their absence from this position should be proof that they are not properly cleaned.

Milk cans used in the sale of milk should be inaccessible to the milkman except for a rod used to stir the milk, which could be easily arranged so as not to admit dust.

Other precautions will readily suggest themselves. Further, a dirty condition of the milk should be regarded as a proof that the necessary conditions had not been fulfilled. It is manifest that what has been so successfully carried out in all its details by a private company should not be beyond the power of the public to demand and enforce, provided only the will were present.

The Advantages OF Co-operative over Municipal and State Management OF Production and Distribution.

BY FRANCIS G. BURTON.

I.

IN approaching the consideration of any difficult subject there is always an advantage in having ready access to the works of an impartial writer who has previously dealt with it, or with any section of it. In the Co-operative Wholesale Societies' Annual for 1895 we are fortunately afforded such help by the essay on the nationalisation of railways. Dr. Dunckley was not merely an eminent journalist and widely-read man, he was also of such impartial and judicial mind that he would not knowingly misrepresent the case of an opponent, nor cast aside any of his arguments without exhaustive analysis of them. His political associations and political tendencies inclined him to view favourably any proposals which ostensibly were founded on the good of the many, and to accept any extension of Parliamentary control which appeared likely to promote such good. His essay and conclusion, therefore, are worthy of our special attention, and we are compelled to admit that he must have given weighty consideration to his premises before he wrote: "On these general considerations, as well as those of a more specific character which have passed under review, we cannot possibly see our way to the conclusion that the transfer of the railways to the State would be of advantage to the community."

Dr. Dunckley approached the question of railway nationalisation with a limitation which we may adopt with regard to our present inquiry. "It is not proposed to appropriate the railways without purchase—in other words to steal them. The present shareholders, whether expropriated by compulsion or with their own consent, would at any rate have a fair price." To this we may justly add that the appropriation by the State and municipalities of the duties of general production and distribution would be a gradual one, and would, for a long time at all events, affect only particular trades and forms of industry. The Utopian dreams of Mr. Bellamy, which assume a sudden and immediate transfer of all capital and all industrial enterprises to a democratic and sanctified State, are too poetical to demand serious confutation. The transfer, if effected at all, will be by means of the Fabian scheme of permeation, and we must for some time anticipate a transition period during which the State and municipalities will be absorbing certain industrial enterprises, whilst others, sometimes of similar or allied classes, will be working alongside under private, joint-stock, or co-operative management.

It is quite true that the doctrine of permeation is repudiated by many Democrats as being neither State nor Municipal Socialism; and the transition period is by them considered merely a fantasy of the disordered imaginations of the gentle Fabians. Probably there are some grounds for the repudiation: the Fabian holds much the same relationship to the fully evolved Socialist as the Girondist did to the Jacobin. If, as the advanced Socialists desire, the fruits of future labour are to be stolen from the more skilful and abstemious workers, to be divided equally with the unskilled, the improvident, and the lazy, then there can be no greater immorality in stealing the accumulations of the past and sharing those savings among the descendants of former prodigal sons. Only let us clearly understand the position. It is exactly doing on a large scale that which the burglar attempts on a small scale when he enters a house to filch the silver; it is a wholesale perpetration of the crime for which we at present sentence felons to incarceration or penal servitude; it is an abandonment of those principles of morality which have ruled the world from the days of Marcus Aurelius, and long before.

It is, however, a very different matter to desire the gains of dishonesty and to acquire them. The desire may dominate a large portion of the nation, but the attempt at accomplishment will probably defeat itself. Those who possess will not willingly give up their possessions, and their numbers will be greater than at the moment appears. Wealth has become more widely diffused than a century ago, and the investors in this country bear a larger proportion to the non-investors than formerly. They will, when they understand the nature of the assault and appreciate its disastrous effects on themselves, unite for mutual defence, from the artisan with £10 in the Savings Bank or Co-operative Stores to the millowner or landowner who at present appears the objective of the assault. When it is delivered it will be sufficiently apparent that small, as well as large, holders of property are threatened by it. The strength of the defence will not, however, lie in the number of the defenders, nor in their unity of purpose and organisation, but in the absence of unity among the assailants. We all know, from historical tales, how difficult it is to maintain loyalty to each other among the members of even a small brigand band, where all are known to, and acquainted with the good qualities of, every other member. The very abolition of conventional honesty carries with it the loss of conventional loyalty. Where the brigands are not a small class, but a nation, where the transfer of property is not demanded for their own immediate wants, but for the creation and maintenance of perfect equality, unity of purpose and action will be more difficult and authority of leaders more impossible to enforce. The declaration of the nationalisation of all productive and distributive machinery and ownership would be the prelude to an anarchic struggle for authority, for the direction by the political leaders of these newly-acquired agencies. During the struggle for authority either production would be impeded or cease—that is, anarchy would exist instead of orderly labour; or it would continue under private and co-operative ownership—that is, the declaration would not be enforced. In neither case would the nationalisation be carried out immediately it was declared the law of the land, and the struggle among the leaders would bring into play so many fresh passions, influences, and conditions that it will be difficult to forecast the state of the country when it ended. Though the Greek Republics are somewhat "ancient history" in these days, we may still learn from the conflicts of Pericles and Thucydides, and Alcibiades and Nicias, that the ends of such efforts tend more to personal aggrandisement than the advantage of the people.

It must be remembered that a large proportion of the products of workers in Great Britain is for export abroad. It is quite true that our home trade is even yet of more importance to us than our foreign trade, marvellously as the latter has grown, but in admitting this we are sometimes apt to admit too much. Every yard less of calico exported is not merely a loss to our foreign trade; it is also inferentially a loss to our home trade, because there will be that yard less woven (allowing for adjustment of stocks held), and consequently the wages for that yard unearned by the weaver. As, under present conditions, the weaver cannot spend money which he does not earn, the baker, or grocer, or shoemaker, who supplies him with goods, would in turn feel the reduction of his spending power consequent on the reduction of our export trade. Now, it is possible for this foreign trade to practically cease quite suddenly, and almost in every branch, by the evolution of economic or political conditions unfavourable to its continuance. It is evident that grave difficulties would be encountered in the introduction of this predatory Socialism into any single country; it can hardly be imagined that the difficulties would be less in the endeavour to make it international. The same jealousies would exist, but their extent would be multiplied by the increased number of communities, with antagonistic interests, involved. International Socialism, without any preliminary trial of it, seems hardly conceivable to the sober mind, and yet anything short of international Socialism, contemporaneous in extent with the civilised world, would subject any nation adopting it to economic and political conditions unfavourable to the continuance of its foreign trade. We have a very recent example of the injury which may be inflicted upon even a supremely wealthy nation by injudicious politicial action. The Venezuelan despatch deprived the United States of the ability to float a foreign loan; the declarations of the Silver candidate for the Presidency caused a vast transfer of gold deposits to foreign banks, whose obligation to honestly pay back the coin they received in equal and not in debased coin was above suspicion. The mere threat to appropriate private property without compensation would cause an immediate transfer of all available movable property to foreign countries where such threat was not held forth, and in such transfer the exchange mediums of gold and silver would disappear from the confiscating country. The actual appropriation would entirely destroy foreign trade, because no merchants could safely give credit or ship goods to a country which had legalised confiscation, and by so doing declared emphatically its repudiation of those principles of honesty without which trade cannot exist.

There are thus difficulties very real to overcome before we can expect the introduction of pure Socialism. The people have to be educated into abandonment of traditional honesty, and the leaders of the new movement into loyalty to each other and to their creed, which we do not find among smaller banditti; the sudden nationalisation would either cause an anarchic struggle, or, whilst impeding individual enterprise, would fail to extinguish it; the foreign trade of the country would be deranged, and possibly annihilated, by unfavourable economic and political conditions not adopted by other nations; and the dream of international Socialism, presenting all the difficulties of national Socialism, with increase thereof arising from the jealousies of the several nationalities, appears a present impossibility; all these are obstacles which must be overcome before real Socialism, even if expedient, can become a measurable factor of practical politics. The present disposition of the more thoughtful leaders of the movement is towards permeation of the masses with their ideas, and gradual absorption of varied and successive forms of industry, before making the final plunge. Whilst it is true that this is not pure Socialism, it appears to be the form which more immediately threatens us in this country; it is the interlude to which present political and economical aspects point as intervening between individualism and voluntary co-operation and that militant and compulsory collectivism which is pure Socialism. The bridge may not be satisfactory to the advocates of either form of enterprise, but it is a transition state through which it would seem we must pass before we can attain the promised haven of non-competitive and non-progressive rest.

Now, the anticipation of this transition period is of vast importance in the consideration of the question before us. A transfer of property such as Mr. Bellamy pictured would at once settle many difficulties which at the present time afflict both capitalists and workers; and, whilst it relieved the former of their anxieties, even when reducing their incomes, it would compel the latter to render their daily tale of work with scrupulous exactitude, and without any of those peregrinations from factory to factory in which they now indulge. There would be only one universal employer, the collective people, and from this employer there would be no escape save by leaving the country. In the transition period, however, there would be none of this compulsion: the workers could take service under the State, provided there were vacancies, or they could seek service with capitalist employers; indeed, subject to limitations no more stringent than at present obtain amongst the large railway companies, they might transfer their services from the State to private employers, or *vice versa*, as suited them. The capitalists also would still have choice of investments: on the one hand of loans to the State or municipalities, on the other of advances to or partnerships in other trading concerns. Indeed, the State and municipalities would during these periods be largely in the position of other traders, and subject to the same economic conditions which at the present time rule our markets. We say generally, because there would undoubtedly be limitations to these conditions, and it is important that we should, in the course of our inquiry, bear in mind these limitations and the effects they will have, not only on the particular industry controlled by the State or municipality, but also on the general industries of the country. At the present time any important firm employing the greater portion of the labourers of any particular town exerts in that town an almost commanding influence over its trade, and this influence will be increased when the chief employer of the place is the Corporation, which also has under its control the supply of such necessities as water and gas, and the regulation of the street traffic, as well as police supervision over nuisances or assumed nuisances caused in manufactories. A very slight consideration will show that the powers which would be acquired by the Government, whether it be State Government or Municipal Government, would be so great that only the most progressive Government, comprising within itself or its officials the highest and most cultured intellects of the district, could be trusted to so use these powers as not to paralyse, or partially paralyse, the general trade.

In one respect there is a resemblance between Co-operative and Government Production and Distribution, as in both cases they are associations of a number of individuals for the general benefit, or supposed benefit, of the associates. But the resemblance is a very limited one, because the association is purely voluntary in the case of Co-operative Societies, and can in general be terminated by any associate without incurring any disadvantage—whereas in the case of Government Co-operation the association is compulsorily binding on all who are subject to the Government, and cannot be abandoned by any associate without incurring more or less severe penalties. The Co-operative Association has a monopoly only in so far as it can render to its members distinct advantages which they cannot obtain from other producers or traders; it does not annihilate competition, but only enables those who are members of it to obtain the advantages of free and unfettered competition without being subject to the disadvantages thereof. Government production or distribution, however, either from the first, or from an early period, will be a monopoly—not by reason of the greater advantages it affords, but by reason of legislative prohibition of any competition therewith.

It would be well to confine our consideration of the subject in the first instance to productive operations, a class of labour in which Co-operation has hitherto made less progress than in distribution, and wherein, therefore, it would appear to have difficulties to overcome which would place it at a disadvantage in comparison with collectivism.

Now, in the case of Government proposing to establish workshops for any particular industry, we may expect a serious conflict of opinion between Parliament sitting at Westminster and the local Parliaments sitting at Manchester, Newcastle, Leeds, &c. There is a tendency on the part of Corporations and County Councils, at the present time, to extend their sphere of action, and to free it as much as possible from the control of the central authority. The conditions of trade in the various towns are different. The interests of the inhabitants of those towns are not always identical; in some cases, even, they are opposed, as we at present see the interests of

Manchester and Liverpool to be opposed in reference to across-ocean shipments. In a matter affecting the livelihood of the ratepayers, as this taking over of the productive enterprise would, we must expect that the corporate bodies of each district would endeavour either to make such terms with the State authority as would serve the interests of their own district or to secure the control of the industry within that district. In either case there would be competition between the municipalities, instead of competition between the present private capitalists. Now, Dr. Dunckley says it is not intended to steal capital from its present proprietors; whether they are expropriated by compulsion or with their own consent they are in any case to receive a fair price for their property. But this competition between the State and rival municipalities will probably have the effect of raising the price at which they can acquire the existing businesses, since it will increase the number of purchasers desiring to acquire the existing properties. We have an example of this State purchasing in the acquirement of the telegraphs by the Post Office, which were valued at 2½ millions, and reached two years afterwards, when the purchase was completed, nearly 11 millions. In that instance there were several vendors, and only one purchaser. In the supposed instance there will, it is true, be a greater number of vendors, who, however, will probably combine for their own protection, whilst there will also be several purchasers, probably competing against each other. The capitalised values, therefore, of the industries taken over by the State or the municipalities will be at least their full commercial value, and probably very much more.

How is this capital to be raised? No doubt, in the first instance, the rates or general revenue of the country will be a sufficient guarantee for the payment of interest upon it, and probably for the establishment of a sinking fund. But neither rates nor general taxation for any one year will suffice for the purchase of any extensive industry. The money for such purchase will have to take the form of a loan, which, of course, can be either placed on the public market or transferred to the vendors in exchange for their interest in their properties. It is very essential that we should clearly understand that if we have to buy factories or workshops from their present owners, and not rob them, we shall have to increase the number of bondholders and the indebtedness to them of the nation, or sections of the nation. Now, this is exactly contrary to the whole tendency of the Co-operative movement, and also contrary to the arguments and aspirations of those Socialists who most strongly recommend collectivism on the ground of its compelling equality of sacrifice and service. At present, the capitalist, at least in the majority of cases, gives some service in return for his revenue. He takes the general management of the business, and subjects himself to all the risks of trade and the possibilities of adverse markets. Under the new condition of affairs he will quietly sit at home and enjoy his income without labour, without thought, without risk—deriving therefrom increased security for and opportunity of idle pleasure, even if the amount of it be somewhat diminished.

Let us suppose a more concrete instance. The cotton industry of Lancashire will afford us one. It is a most instructive example of what may be effected under the stimulus of unfettered competition. The genius of inventors has been supplemented by the ability displayed not only by master spinners and weavers, and their several staffs, but also by those merchants who have spread their products all through the world. The purchase of the present mills could probably only be effected at a much higher price than they stand at present in the various companies' books—because not only would the good and prosperous mills have to be purchased, but those which at the present time are not prosperous, and are not paying dividends, would also have to be taken over at some price or other to be agreed upon. In many cases the depression under which the spinning mills are suffering is attributed to rash and foolish speculations in cotton, whilst weavers are frequently able to show that some of their difficulties have arisen from an adverse turn of the market when they were under advance contracts for yarns. These considerations would be urged by the shareholders as losses apart from the intrinsic value of their mills; and they would contend, and probably successfully, that non-dividend-paying mills were intrinsically worth their cost value, less a very reasonable depreciation. The Corporations would, therefore, have only as a surplus of profit available for their sinking fund the difference between the 3 or 3½ per cent at which they could borrow money and the profit they could make in working an industrial enterprise with the conditions of which they were not necessarily, as Corporation officials, acquainted. It may possibly be contended that it would not be incumbent on the State to protect improvident and unsuccessful traders against their own improvidence by taking over mills which are not at present successful. But to leave these out in the cold whilst acquiring the successful mills with a legislative monopoly, or prospective monopoly, of the trade would surely be to "steal" from the shareholders the capital they had invested; and this, following Dr. Dunckley's lines, we certainly do not suppose any Government would, in this country, suggest. But even if it were proposed only to purchase the successful mills, the necessities of the several towns in the district would oppose any such selection. For instance, in Manchester we have mills spinning counts from 80's to over 200's which are always assured of successful return on their legitimate trade. There is always sufficient demand for their production, and climatic conditions prevent any undue weight of competition. In Oldham, on the contrary, much lower counts are spun, and both American, Indian, and Japanese factories can, and do, compete with Oldham for much of the trade which it once possessed unquestioned. Can we suppose that the inhabitants of Oldham would quietly submit to the State or the Corporation of Manchester purchasing the mills in this city which are successful, without any such purchase being made of the lower count mills in their own vicinity? Can we suppose that the inhabitants of Lancashire generally would submit to the State monopolising the most prosperous portion of the spinning and weaving industry, and neglecting the least prosperous portion? The proposal, which would in practice condemn to idleness a large proportion of our present Lancashire spinners and weavers, would most assuredly be bitterly opposed by them, and operatives and employers together, with all the various tradespeople depending on their custom, would insist that the purchase, if made, must be a complete and thorough one—that the State must either take all or leave all. It is easy to forecast the result; the telegraphs inform us very instructively that losses incurred in working an undertaking purchased at a high figure have to be made good out of the rates or general revenue of the country.

We said that during the transition period the industrial enterprises acquired by the State or municipalities would be working alongside private, joint-stock, or Co-operative enterprises of similar or allied classes, and herein will arise another difficulty which the State would have very shortly to deal with. Immediately the Lancashire Corporations or the general State acquired the cotton factories they would come into competition with other industries. Cotton is now generally made to imitate flannel, and the makers of flannel are already complaining bitterly of the competition under which they suffer, and which is threatening the prosperity of their own industry. In the same manner the Yorkshire firms use such mixtures of cotton with wool and silk as renders them closely connected with, and largely dependent on, the productions of the Lancashire mills for their own prosperity. An agitation would immediately spring up for the purchase by the Government of these mills, and this agitation would be supported not only by the capitalists but by all the workers employed in those industries. For every diminution in the demand for flannel or for inferior Yorkshire cloths, and every increase in the price of cotton yarn used in the manufacture of these inferior cloths, would be attributed to the Government-owned mills, and on the grounds of "equality of labour and sacrifice" they would ask that their own mills should be likewise taken over. The very monopoly which would be created would, therefore, have a tendency to promote a demand for a further extension of the monopoly, and that in directions not in the first instance anticipated. It is hardly necessary to consider, in dealing with production, how far the demand would extend into shipping or Manchester warehouses, but even without any such extension it is evident that in appropriating the cotton industry the Government would involve itself in demands for further appropriations of a very widely extending character, and involving an enormous increase in the national or municipal debts.

The State or municipalities would not acquire the cotton factories without at the same time obtaining a monopoly of the industry, and securing regulations prohibiting any firm or private individuals from competing with them in it. To some extent this monopoly would relieve them of labour troubles, as there will be no non-federated employers to find work for the men locked out by those employers with whom they are in dispute. There will be only one employer in the industry, and if the men cannot agree with him they will have to leave their trade and seek another. It must, however, be remembered that during the transition period the Government will only have a monopoly in those trades which they have acquired, and though the workmen in those trades, in so far as they are unable to exercise any other, will be practically slaves, yet outside those trades there will be large numbers of workmen who will join heartily with the slave workmen in resistance to any reduction in wages or in endeavouring to obtain any increase of pay or diminution of hours of labour. Both the acquired and unacquired workmen will be voters—and political pressure, as well as mere commercial pressure, will be exercised against the State employer. It is, indeed, doubtful whether the workmen, during this transition period, will not be able to exercise greater influence, and obtain better terms than they can under present conditions. If, however, this be so, the financial outlook is a very grave one. A large number of present employers, who at least understand their business, and who are daily engaged in seeking for better methods of conducting it and for means of extending its operations, would be turned into bondholders, with assured incomes, independent of any services they might render, of any exercise of their own brains, or of any contribution to the general good of the abilities which they at present exercise. On the one hand, the new employer would lose certain technical ability for superintendence; on the other, it would gain labourers who, by trade conditions and monopoly of employment, would be reduced to a condition of partial serfdom, but who would be supported by every free labourer in the country when demanding amelioration of their lot or increase in their remuneration. The margin of profit would, therefore, have a shrinking tendency, and might speedily reach a plane in which it would not cover both a sinking fund and the interest agreed to be paid. It is as natural for politicians and statesmen as for directors to take the lines of least resistance, and it is more probable that the sinking fund would be suspended, and the duration of the bonds extended, than that default would be made in payment of the interest. Any diminution of profits would, therefore, tend to the perpetuation of a new class of idle individuals, rendering no services in return for the profits which the helots make for them.

These financial difficulties are avoided by Co-operation, and primarily so because Co-operators obtain no monopoly save such as they gain by their own ability, by their own industrious attention to the requirements of their customers, and by their own shrewd observation of the demands of the outside world for their wares. Though the Co-operator is not compelled to purchase old and decayed factories, he has no power to prohibit the owners of such factories from employing them to the best of their ability, and to the utmost extent which the factories have the power to produce; and thus there is no ethical obligation for him to render assistance to his own injury. He is not compelled, being a Co-operator in Manchester, where he is spinning fine counts, to assist the spinners of coarse grains in maintaining the useless and disastrous competition with Indian or Japanese factories. Indeed, the knowledge which he acquires in the conduct of his own business would rather impel him to discontinue a decaying portion of an industry than to support it by a pauperising contribution from his own earnings. He would rather suggest, either to the private or joint-stock owner, or to the Co-operative Society, possessing antique mills and mediæval machinery the desirability of replacing them with works suited to modern progress and conditions than tax himself to prolong the lingering throes of a commercial death. There is no mercy in endeavouring to stop evolution for the benefit of those who will not keep up the pace set them in competition, and no one knows this better than the true Co-operator. From the first inception of Co-operative Societies the whole tendency has been to distribute the best possible goods; to purchase the latest, most improved, and most efficient machinery which can be obtained; and to use every effort which will, by improving mechanical means and organising conditions of labour, lighten the merely manual task of the labourer. The Co-operative Societies have a further financial advantage over the State or municipalities during this transition period. If, as is probable, the profits of the industry diminish under Government in an increased ratio, the sinking fund would probably suffer before the interest of the bondholders is repudiated ; but, even before the sinking fund is touched, there will be a serious effort made to reduce working expenses. We have seen this cannot be done in the way of wages, but repairs and renewals, and, still more, the replacement of obsolete machinery by new patterns, affords a fruitful source for retrenchment. Any-one acquainted with our great industries is aware that during a time of depression employers who are deficient in capital, or whose works have during the past period been unproductive, are very loth to either improve their machinery or even keep it up to its highest working order during the continuance of the depression. Many of our boiler explosions, many of our losses of ships at sea can be traced, not so much to want of knowledge as to want of financial resources on the part of the owners ; and a poor collectivist nation will be no more inclined to diminish its available income for the purpose of increasing its fixed capital than will a poor individualist owner.

There is one method by which, during the transition period, these financial difficulties may be disguised, but it is well to remember that they will only be disguised, and not evaded or overcome. The receipts and payments on account of the acquired industry may be merged in the general receipts and payments of the State, and any loss or deficiency arising therefrom recouped out of the general revenue. At the present time it is most difficult in some of the municipal accounts, and also in the accounts of the general State Government, to isolate particular items of expenditure and compare them with the corresponding items of receipt. It is quite true that in some particular cases the figures are so stated that the loss borne by the general revenue may be ascertained, as in the case of the Postal Telegraphs and the Manchester Ship Canal. But these are isolated instances, due rather to an excited public opinion on those particular subjects than to a desire of the officials to display to public scrutiny the results of their business arrangements. It will also be true that skilled accountants may be able, from a mass of figures in the public accounts, after long and laborious research, to compile an approximate Profit and Loss Account ; but neither the figures themselves nor the Profit and Loss Accounts compiled therefrom will be generally available to, nor studied by, the larger public. If, therefore, there is such a decrease of profit as will not leave a sufficient margin to pay both sinking fund and interest, there will be a ready means at hand to tempt the Chancellor of the Exchequer or the local

Treasurer into financial paths which are certainly not desirable, and which impose taxes upon the people under false or disguised pretences. The Co-operative Societies have no such temptation. It is quite true that they may lose money on one section of their work, and make the loss good from other sections, when, as in the Wholesale Societies of England and Scotland, or the larger distributive societies, they are engaged in various diverse forms of commerce. But it must be remembered that these corporations profess to their shareholders to make their profits and declare their dividends on the sum of their general transactions, and not on each particular pound of tea or ounce of pepper which they sell; nor do they attempt, nor have they the opportunity, to shift the burden of their loss on to any other shoulders than their own; they cannot do so on to their customers, or their sales would decrease; neither can they do so to their vendors, or they would be unable to purchase in a market which would speedily operate against them.

II.

However much we may desire to treat productive as distinct from distributive operations we shall find it is impossible to do so. The sole end and object of production is that the products may be distributed, and the two processes are so inseparably intermingled that we cannot properly think of the one without giving some consideration to the other. Dr. William Smart, in his recently-published "Studies in Economics," points out that, although "the producing man is essentially a servant of the consuming man, and the final direction of industry lies with the consumers, yet the striking fact meets us that, under modern conditions, the immediate direction of industry is elsewhere." The link between the two classes, and who, by his position, becomes largely the guide and regulator of both, is the middleman or merchant. The producer, whether working man or employer, has simply to work to orders given him. He does not come into immediate contact with the consumer, but sells to and follows the directions of the merchant, the distributor, or retailer, who is in close touch with the demand. Hence, the producer has the course of his business regulated by the distributor, who is intermediate between himself and the consumer. But the consumer, himself, has his demands modified by the same authority. The merchant does not merely follow the expressed wishes of consumers, nor even of retailers who sell immediately to them, as given in orders, but he also endeavours, by variations in quality, in manufacture, or fashion, to tempt their wishes, and by careful selecting and holding stocks to interpret and anticipate their desires. Thus, on the one hand, the merchant is the ally of the producer, assisting him to obtain employment for the labour and capital of past generations which are sunk in buildings, machinery, and means of transit, by exciting wants and guiding consumption which, without his allurements, might possibly not arise; on the other hand, he is allied to the consumer, and becomes his representative by the directions he gives to the producing class, and by making a market only for such goods as meet his intepretation of the popular demands. Thus, the middleman, the merchant, whom journalists and lecturers so frequently ignorantly abuse, has a place, and a very useful place, in the service of the community, and if the present occupants of the position are by any means displaced or annihilated we shall have to replace them with others who, under different titles, and, possibly, on different terms of remuneration, will perform exactly the same duties. We have instances of this merchant position being occupied both by Co-operative Societies and by local authorities for other than the private benefit of the middleman; and though these instances have, so far, not proved antagonistic, it is well to consider their general tendency in these days, when so many demands are made for radical changes in the forlorn hope that out of changes some good may possibly arise.

It is hardly necessary to point out to Co-operators the benefits which have accrued to them through their societies becoming distributors and merchants. There is, however, one benefit which, in the multiplicity of conveniences they afford, we are sadly apt to forget, and that is the training which they give to their members in the due and wise regulation of their consumption. Dr. Smart says: "Forgetting that the industrial world is our servant, and, like any good servant, is only forestalling our wishes, we get into the habit of thinking that we have no responsibility for what we buy. Thus the responsibility which the consumer could not have escaped if he had kept the direct guidance of industry in his hands he has avoided by leaving it in the hands of the producer." No Co-operator dealing constantly with his store can entirely avoid this responsibility or be wholly oblivious to its existence. To him, if he thinks (and most Co-operators do think), it is evident that his stores committee and stores servants will only supply such goods as he demands, of such patterns as he desires, and of such quality as he indicates. If any case appals him of sweating labour under unsanitary conditions, there must be immediately presented to his mind the question: Does my store supply such clothing or such furniture, and does my committee sanction production under conditions such as these? If English dairy farms suffer from foreign competition, if from his fellow-countrymen he hears complaints of Normandy butter supplanting English dairy butter, he is aware, if he thinks at all, that he is directly responsible for some of this transfer of business to the foreigner. Are not the stores his stores? Are not the store servants his servants? And he must, therefore, consider whether it is for the benefit of himself, his fellow-consumers—and, taking a still wider range, of the community generally—that produce should be imported rather than it should be encouraged in the immediate neighbourhood under conditions to which that neighbourhood is limited. The duty and responsibility which Dr. Smart says the public in general have avoided by transferring to producers, or to merchants as agents of the producers, of the control which properly ought to be exercised by the consumers, has to some extent, though not yet fully, been regained by the Co-operators. Would the same effect follow from State or municipal control?

It is almost impossible to conceive that an equal educational process will follow from municipal distribution as from Co-operative distribution. The committees and officials of Co-operative Societies are elected by the members of those societies—that is, directly by the consumers of their wares—and they are expressly elected for the procuring and distribution of the goods which are to be consumed by them. Members of Parliament—that is State representatives; and Town and County Councillors and Aldermen—that is municipal representatives, are, however, elected for much more varied considerations than those of the distribution of produce or goods; and their ability to direct such distribution, or even their success in it, will be only one factor, and that a minor factor, contributing to their selection for or continuance in office. Moreover, the electors will not be consumers only, but a great number of other voters whose opinions on Government distribution must be entirely independent of and apart from their own uses of the distribution. We have an example of this already in some of the purposes for which loans have been applied by local authorities in England and Wales. In the year ending 1893 the outstanding capital which had been applied by local authorities for artisans and labourers' dwellings improvements was over four millions sterling. The consumers of these improvements are the dwellers in the cottages and barracks erected or improved by the authorities. Now, it is hardly necessary to point out the absurdity of supposing that these consumers either selected or have now the power to dismiss the representatives and officers who erected the dwellings. It is hardly necessary to say that the consumers do not exercise any thought or bring to bear any influence on the modification of the dwellings in which they live. The local authorities and their officers have been chosen for many reasons, amongst which these labourers' dwellings is one of the least. There is no education of the tenants themselves, and if we may suppose that there is any education of other electors it is education of the producers and not of consumers—it is a further evasion of that which, as a public, we have generally neglected—the direction of the goods produced by those who have to use them.

It must not, however, be forgotten that there are financial difficulties attendant on distribution as well as on production, and that these difficulties will be aggravated by the same demands for extension of operations as would probably arise in the case of the cotton or similar industry. An eminent writer recently said: "Then there is the burning question of the liquor traffic, which, to the present writer, seems destined to fall under local public control—at any rate, in the populous cities in which prohibition will be impossible." If we admit the right, in the public interest, to suspend or appropriate licences without compensation, it is evident that considerable numbers of people who now sell under Grocers' Licences will be injured by the municipal appropriation of this portion of their business. They may be unable to obtain any compensation for their liquor trade, but they will agitate for the municipality which has absorbed one portion of their business to at least take away and compensate them for the remaining portion. And this agitation will be supported by other distributors, who, seeing part of the trade of the grocers appropriated one day, to the detriment of their remaining business, and without compensation, will fear that the attack may the next day be directed against themselves, and that some portion of their retailers' work may, by a progressive and socialistic municipality, be appropriated without any payment to themselves, in the name of the interests of the people. Nor will the agitation be confined to employers only. Every workman in their service, every clerk, cashier, and manager, will feel that his interests are bound up with those who employ him, and that if the business which finds him and his family bread is endangered or damaged the Corporation which so endangers it should at least find him adequate employment. All these extensions will require capital, and capital must be raised by loans! Thus, in distribution, as in production, we shall have created an additional body of bondholders or fundholders, divorced from business, and rendering little or no personal service for the income they draw.

It must be remembered that distribution involves transport. It is not necessary to consider the case of the railways, so ably dealt with by Dr. Dunckley in 1895, but transport does not end with railways, nor are they the most important factor in merely local distribution. Carriers of various kinds find employment in each local area, and these carriers would almost immediately come into conflict with the State or local authorities, and, in order to secure a survival, would claim to be taken over. The carriage question is a more important matter than at first sight appears—for a large amount of capital is involved in it, and a large amount of labour and plant of this character is employed in the distributive process. But whatever the State absorbs it absorbs as a monopoly. Whatever it takes over it takes over in the public interest, and there must be no competition with that interest. If a municipality sent a carrier's cart once a week to a village to convey produce to and from its central stores it would be an injustice to the public for any farmer to use his own cart, which for the afternoon he may be able to spare, to convey a load of potatoes from his barn to the central store. In the public interest the horse must stand idle in the stable, eating his corn and doing nothing in return for it, that the monopoly of the Corporation may not be infringed upon. It is hardly possible to point out all the ramifications which the monopoly of distribution in any trade, or set of trades, will involve in the general transport arrangements of the country, apart from the greater undertakings of the railways and the canals. Indeed, we should rather say it is impossible to imagine where the ramifications will stop short, or what private individuals will not in some way or other be affected and injured?

It is too often urged that the State and the local authorities in this country now undertake so many productive and distributive duties that it is too late to consider the advantage of their doing so, and that, having started on such a career, whether it be for good or ill, we must continue in it. Of course, if the career be a downward one, and injurious to our social and national well-being, it is mere cowardice to refuse to recognise the evil and to retrace our steps. But the advocates for it would not merely refuse to stop and consider the relative advantages and disadvantages, they point to the amount of capital outlay by local authorities as an unanswerable proof of the advantages of such outlay, and as a sufficient reason for further increase of it. Mr. Herbert Spencer, who is certainly not one of the least profound of modern thinkers, warns us of the danger of using statistics without inquiring what is behind the statistics; and it is equally fallacious to use an accomplished fact as a sole and irrefutable argument for the righteousness of such fact. Before we can judge whether the 215 millions owing by the local authorities in 1893 are or are not for the advantage of the country in general it will be necessary to inquire whether the expenditure has produced greater benefit to the consumers than they would have gained from private or co-operative enterprises. This interminable inquiry is rendered more difficult, if not impossible, by the monopolist conditions under which the money has been expended, and which prevent our having any standard of comparison by which to gauge its wisdom or advantage. For instance, we have 32 millions spent in harbours, piers, docks, and quays, by local authorities, expenditure which undoubtedly has been of service to the country at large; but we have no means of judging whether the service rendered has been the utmost which could be obtained from such an expenditure of money, or whether greater advantages might not have been secured under a *régime* of pure competition, of unfettered contract. It is this want of standard of comparison which renders the recital of accomplished benefits such a dangerous quantity in our present investigation, and one more captivating to the emotional multitude than the practical and thinking economist.

There is, however, one point wherein we can compare Co-operative enterprise and municipal distribution, and it is a comparison which the sturdy independence of Co-operators and their high sense of honesty will enable them to appreciate. The Bolton Town Council, as gas producers and distributors, charges 3s. 2d. per 1,000 feet to its gas consumers—making out of that price a profit of £29,000 per annum, which is virtually £1 per head, in addition to the income required for interest and sinking fund. The village of Bethesda has 54 public lamps lit free by its 117 private consumers. The Wombwell Local Board has 160 public lamps lit free by its 349 customers; whilst the town of Bradford manages to get nearly 7,000 public lamps lit without charge out of its gas profits. Now, this, whether we at first sight appreciate it or not, is deliberately pauperising the whole of the inhabitants of those places who are not gas consumers. It is giving them something out of the public revenue for which they are themselves able to pay, and for which they render no service nor contribute any return. This pauperising present to the non-consuming inhabitants of those places is made out of the pockets of the gas consumers, and is so utterly opposed to the principles on which the Co-operative movement has been founded and has flourished that it needs only to be thus baldly stated to ensure the condemnation of all true Co-operators. Indeed, there must be in the town of Bolton many decent, respectable, honest-minded inhabitants who do not consume gas, and who endeavour to pay their way and give good value for all they receive, who would, could they realise the fact, be indignant that their elected representatives and highly respectable Town Councillors and Aldermen have for years past been virtually pauperising them at the cost of the unfortunate gas consumers of the place.

III.

The great difference, however, between State or Municipal and Co-operative direction of commercial enterprises is political and ethical—and the method of future evolution will be determined by the latter rather than economic considerations. The most able advocates of Collectivism or Socialism urge the political or moral advantages of their creed, more than the financial gain, as the reason for its adoption. Whatever hold it has gained upon the intellect of the country is due to the idea that it contains germs which promote righteousness and justice, such as do not exist under present conditions, rather than to any anticipation of increased material advantage or accelerated progression of material comfort. On the other hand, the political and moral dangers which will accrue from the extension of Government agency have been those most forcibly insisted upon by the older economists. Mr. John Stuart Mill, in his "Principles of Political Economy" (a work now unfortunately too seldom read, and too little understood), reserves for the last but most important place what he deems one of the strongest arguments against the creed which we now term Collectivism. He says:—

> The business of life is an essential part of the practical education of a people, without which book and school instruction, though most necessary and salutary, does not suffice to qualify them for conduct and for the adaptation of means to ends. Instruction is only one of the *desiderata* of mental improvement; another almost as indispensable is a vigorous exercise of the active energies—labour, contrivings, judgment, self-control; and the natural stimulus to this is the difficulties of life.

When in the balance is being weighed the power of a nation to labour, to contrive, to exercise judgment or control its desires and actions, it is evident that mere considerations of taxes, of distribution of wealth, of application of surpluses to provide enjoyment or public parks and libraries, are of utterly secondary importance. The wise nation is better, more capable, and on the whole more happy than the rich nation, and whichever form of production and distribution, whether it be Capitalist, Co-operative, or Governmental Socialistic, will most readily and surely conduce to wisdom in its broadest and widest sense is the best for the people to adopt, whatever minor inconveniences it may involve. There is a very remarkable work recently published by Paul de Rousiers on "The Labour Question in Britain," which embodies the result of an inquiry by him into the conditions, aspirations, and prospects of the English labouring classes. Mr. Henri de Tourville, in his preface, points the moral of the inquiry, which is, that it is rather in the production of the *Man* than in the organisation of labour or the mere acquirement of improved material conditions that the hope of the working classes lies. Recognising how much this has been missed by his own (the French) nation, he says :—

> Neither knowledge nor appliances are wanted for material, mental, or moral action, and both are progressing from day to day. It is the man that is lacking, the man to match such knowledge and appliances. The real problem of modern times is the question of human development arising in due course after that of the development of other natural forces. A great enterprise has grown up, but there is something wrong with its working. After blaming all the forces of nature, and after appealing to all of them, it has at last been realised that what is wanting is the man.

In England we have a Constitution and institutions as democratic as at present it seems possible to make; but we must remember that neither democratic institutions nor democratic municipalities will work the ends they are intended without there is a true democratic spirit in the people. This spirit, as interpreted, not only by Greek philosophers, but by Rousseau and his contemporaries, who made liberty their song, is chiefly and primarily opposed to the creation of any form of tyranny, whether it be tyranny of the monarch, the dictator, the delegate, or even of the sovereign people. The mere existence of the institution without a true democratic spirit will not only fail to produce true political and social freedom, but will absolutely create in the people a spirit precisely the reverse of freedom. In proportion as the people have the power conferred on them by the Constitution they will acquire the desire and ambition to dominate over others, to exercise that very tyranny which their ancestors in former generations had been opposing when exercised by kings and nobles. Exactly in proportion as the real initiative and direction lies in the Government, exactly in proportion as individuals turn to that Government for instruction and direction, there will be developed, down to the very dregs of society, the ambition for political power. There is another distinction between a democratic Constitution and government truly by the people which is too often overlooked. Rousseau, in his "Social Contract," points it out, although he has probably drawn a sharper demarcation between the legislative and executive than in actual practice is possible. For every free nation there are two concurrent causes—the one moral, being the will which determines the act; the other, the physical power which executes it. The former he distinguishes as the sovereign, that is, the people, who ultimately determine the policy of the nation and the making of laws and of customs; the latter he denominates the prince, being the king, the president, or dictator, with all his numerous army of secretaries, councillors, governors, and other publicans and sinners, who execute and administer the supreme will of the people. He maintains, with Hobbes, that as between the sovereign and the prince there is no contract, that there is absolutely nothing but a commission, an employment which could at any time be limited, modified, or resumed; but we must always bear in mind that practical politics and philosophical politics are widely divergent, and that the Utopias of which Plato dreamed or Bellamy babbled are not to be found in this mundane sphere, nor likely to be so found during the transition period of which we are speaking. We already find that the officials of a nation are rather the rulers of the people than their servants, and that the prince, like the mayor of the palace of old, is the tyrant of the sovereign from whom he derives his authority. Every multiplication of Government offices and Government employments tends to create an additional body of officials, whose power will increase and become more firmly riveted with the increase in their numbers. It may be imagined that when all, or a majority, of the people are the servants of the Government, or, as it is sometimes euphoniously styled, when all are the servants of all, the danger will disappear; but a very momentary consideration of present departmental and other executive arrangements will show that this will not be the case, at all events during the period to which at present we are confining our consideration. It is quite as necessary in a "department" as in a private factory to have in the executive of the workers certain gradations of rank and authority, and, as it has been found in this country desirable to make public appointments tenable for life, or during good conduct, the authority in a department is more permanent, and therefore more dominant, than in a private factory. The man at the bottom of the official ladder seeks to know, and to conform to, the mind of the man on the rung above, who, in his turn, endeavours to conform to the opinions of the man immediately before him—so on until the top of the ladder is reached. By these successive means the whole ladder represents the ideas of one man, and one man alone—that is, the permanent official who, for the nonce, occupies the topmost rung. He may possibly be progressive, he may possibly possess more than the average amount of intelligence; and in that case the department keeps nearly, if not quite, abreast of the increase of knowledge in the rest of the world. But, on the other hand, he may be conceited, pedantic, and conservative in his ideas, and all the department suffers from the inertia of which he sets the example. History and induction alike teach us that it is only by the increased diffusion of intelligent activity and public spirit among the governed that a sufficiently high standard of progressive civilisation can be maintained in the governing class; and it is, therefore, of supreme importance that all classes of the community, down to the very lowest, should have their general lives so separated and distinct from the lives of the governors that they may have much to do for themselves and much inducement to do it.

It is in the discussion and management of free collective interests that we find the school in which the people are trained for those political activities into which, alas! so many now enter without due consideration or adequate knowledge. Mill says: "The people among whom there is no habit of spontaneous action for a collective interest, who look habitually to their Government to command or prompt them in all matters of joint concern, who expect to have everything done for them except what can be made an affair of mere habit and routine, have their faculties only half developed—their education is defective in one of its most important branches." It is this defect which Co-operative Societies are by their organisation and management most admirably fitted to overcome. Throughout the land we have Co-operative Stores established, some of them small, some large, but in the management of which every member takes a more or less active part, and every purchase or sale of which is subjected to the rigid scrutiny of their *clientèle*. It may be that the interest is at times perfunctory, and is seldom scientifically critical; but this interest and this criticism, even if it be of a defective order, is what before all other things is needed for a free people; it is training for an examination of the acts of the executive, and training in the ability to understand the motives and the results of such acts. There can be no doubt that if the most dangerous opponent that the tyrant encounters is a people accustomed, even to their lowest workers, to the habitual management of their own affairs and careful consideration of their own private trade and employments, then there is no greater security for political freedom than a nation composed chiefly of Co-operators who are habituated to this management, not merely in their own homes, but in its wider form of combination with their fellows. We are appealed to by the advocates of State and municipal management on political grounds, and on political grounds we answer that whilst their panacea for evil entails bureaucracy and tyranny in its train, our Co-operative method brings with it greater ability, and ensures more complete liberty and equality. On political grounds alone we are safe in deciding for Co-operation.

There are reasons, which some of the Socialists term ethical, frequently urged for Government employment, but which on examination we shall find to be rather emotional than ethical. It is perfectly true that there is misery in the world, that wealth is unequally distributed, and happiness unevenly spread abroad. A consideration, however, of the causes of the inequality of distribution will show us that whilst some of it may be, and probably will be, eventually remedied by a more intelligent appreciation of our relations to each other, a considerable portion of the inequality, and probably even the larger portion, will still remain in existence, and that it can only be remedied by an improvement in the characters of the individuals who form the atoms of society. Want of judgment, want of self-control, undue gratification of lustful appetites, will entail misery on men, whether they are employed by the State or by capitalists, and will likewise entail upon them poverty so long as we have any exchange medium in operation. The only way in which to prevent men who have not learnt the difficult lesson of self-control from inflicting upon themselves or those dependent upon them grave injury is to place them under some restraint, and this restraint is an infringement of that freedom which we are so often told is the ultimate object of democratic Government. The assertions and presumptions in which the advocates of municipalisation indulge are tainted by the errors "which men commit when their morality is not a science but a taste, when they abandon eternal principles for accidental associations." They are more often worthy of Protagoras and the Sophists than of honest, straightforward, blunt Britons. Thus we have it asserted that "wherever communism is the most economical and most convenient principle of administration the service is one for the public authority to undertake." The example given is the London County Council's new ferry across the Thames at Woolwich, which, by the means of rates, conveys free several millions a year of passengers, who, under commercial management, would have to fumble for pennies every time they cross the river. It is, however, by no means clear from the example that communism is the most economic and convenient principle of administration. The convenience is only to the passengers, who are but a portion of the community; but there is inconvenience in the form of a tax on the much larger portion of the community who neither use the ferry nor ask their representatives to provide the service. It is in this instance of the very essence of pauperism—it is supplying a man with something for which he does not fully pay at the cost others who obtain no convenience therefrom. There is an assumption, also, which has not by any means yet been settled, that communism is the most convenient principle of administration. If that principle could be settled in the affirmative, it is clear that the limitations to it would be very few, and that on economic grounds the interference with our present modes of life would be far reaching. But to assert that the thing is, when it is as yet a matter of dispute, and on that assertion, as an *à priori* assumption, to base further arguments, is purely and simply sophistical, and it is hardly too much to say, also immoral. Again, we are told: "Where the service to be supplied, though productive of advantage to the whole community, yields no pecuniary return, the business is one for Municipal Socialism." And the same assertion is made where the public good requires that the service shall be conducted irrespective of cost of production and supply below cost price. Now, it is evident that statements like this throw no light whatever on the consideration before us, and that they are merely silly, excepting that by their ambiguity of expression they are apt to mislead. Of course, if the service absolutely necessitates a public supply without pecuniary return, the proper way to meet the charge is by taxation on the entire community. We have such an instance in the case of our Army and Navy and our police officers, who are employed to keep foreign marauders from our shores and burglars out of our houses, but the exact value of which to each individual cannot be ascertained, and where, therefore, the most equitable and economical method is to charge the cost on the taxes of the country. But to draw an analogy between services such as these and such services as the supply of bread and bacon, the value of which to the consumer can readily be ascertained, is certainly stretching reasoning by analogy to an extent which few logicians have the audacity to attempt.

It is also asserted by some Socialists that where it is a public interest that the consumption should be stretched to the utmost possible extent, and also where it is a public interest that it should be reduced to a minimum, the service is one for Municipal Socialism.

These assertions cover a vast deal of ground, and carry with them the error of assuming a *major* of huge extent which includes the particular proposition intended to be proved, and also a great deal more. The proposition intended to be proved is, in the one case, that gratuitous hospitals and infirmaries should be provided by the municipalities of all civilised communities, in order that the sick may be properly doctored; but it equally indicates that bicycles should be provided by all compulsory co-operative bodies in order that the inhabitants of the district may retain their health, and so not be compelled to indulge in the luxury of the municipal hospital. The minimum consumption is that of ardent spirits, which involves a contentious question on which neither scientists nor any large majority of the population have yet arrived at any decided opinion. A large number of people are of opinion that a "minimum consumption" of poultry and butchers' meat would be beneficial, and, therefore, if we admit the assertion of the Socialists, it will be deemed desirable by believers in Vegetarianism that all butchers', fishmongers', and poultry dealers' shops should be taken over by the municipalities in order that the consumption may be restricted.

Again, we are told that where the service is necessarily a monopoly, or where it is desirable that the whole service or the whole supply of the commodity should be under a single administration, Municipal Socialism is preferable to capitalist enterprise, whether individual or co-operative. This is simply begging the whole question in euphonious terms, calculated to impress the unthinking multitude. Monopolies are not by any means so numerous in this country as is asserted. As Mr. Mill pointed out a generation ago, there is always, in the United Kingdom at least, so much capital seeking investment that it is almost impossible for a monopoly to exist, unless it be a monopoly created and exercised by a Government or a Corporation. It is true that in the case of railway companies there is apparently such a monopoly, but a closer investigation will show us that it is only apparent, and that a very intense, though perhaps not a very publicly exhibited, competition really exists.

It is further urged that "where any service or a supply of any commodity involves the exercise of exceptional and arbitrary powers over individuals, or upon the public property, Municipal Socialism becomes a more desirable form." Surely there must be a limitation to this premise. Mr. Frederick Dolman, in his articles on Corporations in "The New Review," tells us that the Aldermen and Town Councillors of Manchester took advantage of the Electric Lighting Act to prevent any public company or Co-operative Society supplying the city with electric light, reserving to themselves the right to do so when they considered the proper time had arrived. And this proper time was deferred for some years, during which interval the unfortunate inhabitants of Manchester were afflicted with the use of indifferent Corporation gas when a better light was available had they been permitted to obtain it. When the advocates for municipal extension and control can forget or ignore such instances of improper or unfortunate use of local authority as this it is no wonder that we should hear them speak of the "progressive integration of processes," and assert that this evolution must force any local authority to execute any works required for discharge of its functions by its own directly employed workpeople, without the intervention of any contractor. The proposition is again stated in those wide-spreading generous terms which are so captivating, which seem to mean so much, but which contain the fatal fallacy of proving a great deal more than is intended. It is easy to talk of evolution, but it is not so easy to understand all that the word implies. It does not merely cover "integration of processes," but also segration of matter and labour; and when, in connection with any municipal business, we take into account this segration, we shall find that the entire abolition of contractors will be a retrograde step, and contrary to the policy which has been a dominant idea both of Co-operative Societies and private or company capitalists for many more than twenty years.

It is hardly necessary to pursue these Protean arguments further. They change their character to suit the susceptibilities of the audience, and are more adapted for creating an ephemeral impression than for enabling men to ascertain the relations of the fearfully complex and important character of the propositions placed before them. There is only one more of them to which we need refer; it is that if we want the standard of equality or taste raised above the level of the demands of the average man we have perforce to lift the subject matter out of the plane of competitive profit making, and decide upon other considerations than those of cost and demand. Here again we have a fallacious combination of terms which are certainly not universally related. It is not true that the public taste is ruled entirely by the consideration of cost and demand—the determining factors are rather those of comparison and education. It is not true that a profit-making competition never produces a cathedral. The cathedral in its truest and highest sense is not the product of the artisans who work on it or the artists who carve its stones; but it is the product of the man who from his own brain, and by his own educated talent, evolved the glorious conception—and this conception is the outcome of a desire for profit, and, in many cases, actually of a "profit-making competition." It is absurd to imagine—and, indeed, it is a gratuitous insult to English readers to suppose—that the citizens of St. Helens, or Widnes, or Grimsby, in "conflabberation" assembled, could, with all their deliberation, imagine a cathedral like that at Florence. Knowledge is gained by relationship—knowledge of architecture by comparison, and skill in devising by culture of the eye. The architects of Florence had all these facilities in their favour, but the citizens of St. Helens would only have as a primary model for their cathedral a salt-covered chemical works or a huge blackened chimney. We can, indeed, almost conceive that even their appreciation of the value of the work when it was presented to them would extend little further than that of the Town Councillor whose idea of gauging the cost of a fresco was to measure it with a two-foot rule.

STATE MANAGEMENT OF PRODUCTION AND DISTRIBUTION.

IV.

It is impossible to review the present condition of the industrial world or to remember the discontent of the labouring classes without admitting that the capitalist and profit-making enterprises of past decades have to some extent been a failure. We must admit that the people at large are far more comfortably housed, fed, and clothed than they were a century ago; that their intellectual acquirements are immeasurably greater; that their dwellings contain luxuries which formerly were unobtainable even by the wealthy classes. All these gains have accrued under the competitive or capitalist system; but along with them has grown up a spirit of discontent which threatens grave dangers in the near future, and compels all thinking men to seek for some remedy for the admitted evils of our commercial system. To abolish the capitalist in favour of the Commune, to pension our present captains of industry and replace them by parish politicians and crotchety philosophers, would probably impose upon the nation financial complications and difficulties of immense import. As these difficulties pressed upon the communities we should incur the danger of deferring and neglecting improvements and renewals in machinery—of spending, for the benefit of the present generation, some portion of the revenue which under wiser and more thoughtful consideration would be capitalised for the benefit of the next—and thus stem that stream of progress which has made us heritors of our present wealth and comfort. On the other hand, it would appear that at least these financial difficulties would be avoided by the extension of the principles and operations of voluntary co-operators. It would further appear that the diversity of invention and method which in the past has been so productive of great improvements would under Communism be restricted, and in some cases even abolished, whilst under voluntary co-operation it would be encouraged and fostered, the consumers ever seeking for better and increased supplies, and urging their committees and managers to take advantage of the still unappropriated stores and powers with which bountiful nature supplies us. It would appear also that Communism will create a governing class, and, as it spreads, reduce the greater portion of the population to the condition of serfdom or slavery, whilst on the other hand Co-operation will tend to elevate the condition of the poorer classes by training them in those moral virtues of abstinence and self-control which alone can effectually improve the race or raise it to a higher plane of existence in the future. Can there be in the mind of a sober thinking man any doubt as to which system is the better? The sovereign power must, undoubtedly, be in the hands of the people

—that is, of the State or the Commune—but the princedom, the executive of life, is most wisely left to individual and voluntary co-operative effort, which in the past has used it, despite many blunders, for the general advancement of the race.

There is a lesson which even Co-operators should learn—it is taught us all through nature, as well as in political and commercial combinations: the race which rests, and seeks the happiness of the hermit crab, very speedily decays. It is only in conquest over difficulties, as they arise day by day, that salvation lies. If the Co-operative movement is not to die out, and be choked by this weed of Socialism, it must spread itself wider and wider. It affords to the world all the advantages of competition, whilst it avoids the cruelties which arise under an uncontrolled and unbridled capitalist system. But those who, in the past, have benefited, and who still benefit, by the free and unfettered scope which it affords for individual effort, apart from mere miserly greed, must endeavour to extend those conditions to their fellows. From the commencement of the movement it has been chiefly successful in distribution, and it is sometimes looked upon as antagonistic to the producer. Between production and distribution there is, however, no real antagonism, and that which seems so arises entirely from present commercial exigencies, which Co-operators have been striving to remedy. There is, therefore, a problem before them—the problem of reconciling the duality of production and distribution—a duality reminding us of the unsolved Greek problem of being and becoming. The achievements of the movement have been so great in the past, the morality of the movement is so true and elevated, and the character of it is so suited to the individualistic temperament of the Anglo-Saxon race, that we cannot doubt the solution of this later and greater problem, if only Co-operators will earnestly work. With opponents so active and unscrupulous it is evident that assiduous propagation of Co-operative principles and knowledge is necessary to defeat the endeavour to steep the whole world in communism, and to this propaganda are called all Co-operators who truly believe the teachings of their most moral and righteous creed.

The Evolution and Work of the Scots Parliament.

BY WILLIAM WALLACE, M.A., BARRISTER-AT-LAW.

TO the English constitutionalist the history of the Scots Parliament seems a bundle of paradoxes. It was never representative of the people, yet it anticipated all other legislatures in its endeavours to better the lot and vindicate the rights of the tiller of the soil, and it early laid the foundation of Scotland's boasted system of universal education. It never, or very rarely, differed from or opposed the reigning monarch; yet it claimed and exercised from the first an independence which its English sister had to purchase with blood. The question of the sovereign's right of veto was left unsettled even at the Union; and when, at the Revolution, the English Parliament had to resort to legal quibbles in order to give to the succession of William and Mary an appearance of constitutionalism, the Scots Estates boldly declared, of their own initiative, that James VII. had forfeited his right to the Crown, and that the throne had thus become vacant; and while it deliberately deprived itself of free speech almost as soon as it came into existence, and recovered the privilege of open debate too late to learn the proper use of it, the Scots Parliament, in the 400 years of its existence, enacted a series of laws of which the nation is justly proud, and, to quote Mr. Cosmo Innes, established "precedents which a learned Englishman may find useful for solving some of the acknowledged difficulties in the working of the great machine—institutions which even the British Parliament might borrow with advantage." It was, to use the somewhat clumsy jargon of to-day, unicameral during the whole period of its existence; but the Convention of Burghs, which grew alongside of it and has survived it nearly 200 years, was virtually a Second Chamber, directly representative of the people, who legislated through this Burgher Parliament for "the common weal of their Estate," while they also had a voice in the Estates of the Realm when they chose to utter it.

THE EVOLUTION AND WORK OF THE SCOTS PARLIAMENT.

The Scots Parliament was a development of the King's Court, and the King's Court was shaped by the feudal system, of which we can discover no certain vestiges in the country before the 12th century, when the Celtic kingdom of Scotia became in a manner firmly settled on the ruins of the more ancient kingdoms which it superseded. Under Malcolm Canmore (A.D. 1056–1093) began the English invasion. Saxons fled north to escape the Norman conquerors, and the Normans came after them to possess the land. The Celtic kings took the strangers to their hearts, and gradually the Gaelic maormors (or earls) disappeared from Court, giving place to Saxons, who were in turn ousted by the Norman friends of David I. (A.D. 1124–1153), the first Anglicised Scottish monarch. The Court was, in theory, composed of the feudal vassals of the Crown; in fact, it was attended by a few Churchmen, the great officers of State—Justiciar, Chamberlain, Chancellor, Constable, &c.—and a few nobles. Such was, it is fair to assume, the composition of the King's Court of Council from the date of the earliest record; for so far back as 1107 the appointment of Turgot to the bishopric of St. Andrews was made with the concurrence of a National Council, consisting of certain "bishops, earls, and good men of the country." In the reign of William the Lion (1165–1214) an assize or statute was made which was sworn to be observed by "the bishops, earls, barons, thanes, and the whole community." It is useless to spend even conjecture on the meaning of the phrases "*communitas regni*," "*probi homines*," "frank-tenantry of the Crown," which seem to suggest the presence at Court in these early days of men of the people in addition to the nobles and great officers who are specifically named. Whatever the constitution of the National Council, we see it during the 12th and 13th centuries, scanty as the records are, gradually taking shape as a Parliament. So early as 1161 an "aid" was raised from the people to pay the dowries of the King's daughters, but that might of course have been a purely feudal impost. The great "aid," however, which King William got from the magnates and the burghs in 1211, to pay his heavy debt to John Lackland of England, must be pronounced more strictly of the character of a levy by Parliament. From this incident it has been attempted to prove that burgesses attended the National Council, but probability is on the side of the theory that the burghs, even if they sent representatives to Court on the occasion, were not directly associated with the magnates, although they were on exactly the same footing as the most powerful nobles as vassals of the Crown. During the reigns of the Alexanders (1214–1286) the nobility became more and more Normanised, and the National Assembly added to its functions and widened its grasp upon the national life. Alexander II. was supported by Assemblies when he resisted the admission of legates from Rome and confirmed the privileges of the National Church. The peace which prevailed under Alexander III. favoured the development of the constitution; in this reign the administration of justice by sheriffs was extended to the remotest districts. And when the throne was left vacant by his death (1286), and there was no heir resident in the kingdom, there was a body in existence capable of carrying on the government without a break. The Maid of Norway had been acknowledged heir by an Assembly of thirteen earls and twenty-four great knights and barons, meeting at Scone in 1283. On the King's demise a like body came together at the same place, and appointed a regency of six guardians or wardens—three for the north and three for the south, each set consisting of a bishop and two barons. And a great convention which met at Briggeham, near Berwick, three years later (attended by four guardians, ten other bishops, twelve earls, twenty-three abbots, eleven priors, and forty-eight barons) made a formal treaty with King Edward I. of England in which the independence of Scotland was asserted and covenanted in the clearest possible manner. In this treaty the word Parliament is applied to the National Council or Assembly for the first time, but it was probably Balliol's Parliament of 1289 that first bore the name in the country at the time.

We have now arrived at a period when constitutional government seemed securely founded in Scotland. The great offices of State—such as those of Justiciar, Chamberlain, Chancellor, Constable—had become hereditary. The kingdom was divided into sheriffdoms, and these, instituted by David I. and extended by Alexander III., had also become hereditary. A Parliament made laws for the whole kingdom, and was also the supreme court of justice. The system looks perfect, but it was far from being so in reality. Neither King nor Parliament had anything like the power which they assumed. The early feudal monarchs had given away not merely estates, but regalities or jurisdictions with a lavish hand. Hence, although the sheriffdoms were conferred upon powerful families, there was constant friction between the sheriffs and the semi-independent nobles on whose regalities they trenched. Statutes were now, and long afterwards, rather abstract resolutions than laws in the modern sense; for the machinery for carrying the law into effect was of the slenderest description, and the authority of the Government could safely be defied by the very persons who composed it. And so late as 1385 there survived a special "law of Galloway," under which justice was administered by the mode of purgation and acquittance, according to that interesting fragment of the prehistoric consuetudinary jurisprudence of Scotland, "The

Laws of the Picts and Scots." The extent to which regulations for the punishment of murder and theft bulk in the old statutes is significant both of the violence of the great men of the realm and of the feebleness of the Executive. There is discernible in these statutes a spirit of humanity and personal freedom which is foreign to the Roman law. Unquestionably it was the constant striving of the Crown to break the power of the nobles that gave rise to the statutes affording special remedies to the poor and friendless, such as Alexander II.'s law giving redress in the King's Court to any man whose lord arbitrarily deprived him of his holding, and the various statutes emancipating thralls or slaves, in which Scotland on the whole took precedence of England. For anything like orderly, settled, symmetrical government at the end of the 13th century we must turn to the burghs, which were not yet admitted to a place in the Great Council of the nation. The Scottish burghs are not the direct descendants of the Roman municipalities. Rather was their constitution imported from the Continent *viâ* England. David I. found numerous townships in his kingdom ; he gave them laws, and encouraged them to elect magistrates and combine for their mutual benefit. During his time there was a Hanse or League of the northern burghs, and a Court of the Four Burghs—Edinburgh, Berwick, Roxburgh, and Stirling—met regularly in the south, and was presided over by the Great Chamberlain of the kingdom. This court may or may not have been the author of the code of burghal laws which dates from David's time. In the 13th century it decided questions involving the usages of the burghs, and even legislated such matters as the principles of succession. A burgess was a free man in a sense that no other inhabitant of Scotland was except the King and the most powerful nobles. Yet up to the epoch at which we have now arrived the burghers had taken no share in the government of the country. The Court of the Four Burghs was a sort of Lower House, with a mixture of judicial and legislative functions exactly as in the Great Council of the nation. And it was important enough to be formally consulted by Edward I. on a point of law.

The War of Independence was an inestimable blessing to the country, but it wrecked the constitution. Scotland had in 1305 to submit to the humiliation of being represented in the English Parliament by two prelates, two abbots, two earls, two barons, and two of the "community." But when the Bruce came to his kingdom the Scottish Parliament got a fresh start, and rapidly acquired the form which it preserved during the whole term of its life. If it cannot be proved that representatives of the burghs were denoted by the "*majores communitatis*" present in the Parliament of 1315, which settled the succession on Edward Bruce, it is rendered exceedingly probable by the circumstance that in the roll of the Cambuskenneth Parliament of fifteen years later burgesses appear without any indication given that their attendance was a novelty. They had definitely and finally become a constituent part of the English Parliament thirty years earlier. From 1326 they formed the Third Estate and essential portion of all Scottish Parliaments and General Councils.

The assembly at Cambuskenneth not only marks the admission of "the people" to a share of the government of the realm. It is famous as the fountain of our first claim of rights, the first compact between a Scottish monarch and his subjects. There was established the fundamental principle of a representative constitution. The Three Estates—clergy, lords, and burgesses—voted to King Robert the tenth penny of all rents or profits from land, and in return limited the power of the prerogative to the fair exaction of the established feudal dues. Further, they granted this strictly-conditioned supply to the King for his life only. Once more the default of the Crown led to the aggrandisement of Parliament. David II. was weak and unfortunate, and the Estates were in a manner forced to encroach upon his function and supersede his authority in a fashion that led to their own undoing—if we hold it to have been the undoing of the Scottish Parliament that in this reign it threw away the rights of free speech and open debate, never to be recovered till it was too late. On a subject so obscure it would be useless to dogmatise. But a cause must be sought for the very remarkable development of Parliamentary institutions which was attained, as it were, by a stride at Cambuskenneth. The meagre record discloses nothing so clearly as the independence and business-like character of the assembly. It resolved that its supply to the monarch should "not be drawn into a precedent." Here we discern something of statesmanship, if not an instinctive forecast of a time when a King might drag a reluctant country at his heels to war but for the command of the Estates over the purse. Of course, the English Parliament was by this time a stage further on the road to constitutional government. More than thirty years before Cambuskenneth it had assumed the burgesses as an Estate, and the principle of "no redress of grievances no supply" was already asserted, if not firmly established. Was it then by sheer imitation of the Southern enemy that the Scots Estates came to hedge in their grants to the Bruce with stringent conditions? It may have been so, though nothing would probably have been further from the minds of the Scots at the close of the War of Independence than deliberate imitation of anything English. One cannot help thinking that at least a collateral cause of the marked advance of the Cambuskenneth Parliament on any previous National Council was the advent of the representatives of the burghs.

Having now attained to constitutional manhood, the Scots Estates made a brave start, and seemed at first likely to be a pioneer of Parliaments. The youth of the second Bruce King, the wars with the English, David's imprisonment, and the French alliance (the first of many such dealings with Paris), all combined to stiffen and strengthen the constitution of the reorganised Parliament. There is evidence that the burgesses, at all events, thought much of their new dignity, and appreciated highly the honour of being one of the Estates of the Realm. At the meeting in Edinburgh, in 1357, when the clergy, nobles, and burgesses took themselves bound separately for David's ransom, there were represented the burghs of Edinburgh, Perth, Aberdeen, Dundee, Inverkeithing, Crail, Coupar, St. Andrews, Montrose, Stirling, Linlithgow, Haddington, Dumbarton, Rutherglen, Lanark, Dumfries, Peebles. It may simply be noted that some of these sent three representatives, the others two. At a later date two was the normal delegation, and still later it was reduced to one. It was a hard-driving Parliament this of David's reign, and it had perforce to be Legislature and Executive rolled into one. It controlled the expenditure of the taxes it levied, and exercised an oversight over the King's private account; it entered into details of coinage and currency, and assumed the right to dictate terms of peace or war with foreign States. It called the hereditary officers of the Crown to account, and generally made sturdy efforts to regulate the police of the kingdom.

The pace was too hot. The Estates—especially the inferior ones—tired all too soon of the glory of government. Long before the end of the 14th century the Scots Parliament surrendered its powers to a delegation; it did not resume them till after the Revolution. There is a mixture of the comic and the tragic in the act itself, considered in relation to its far-reaching consequences. It is hardly a straining of rhetoric to say that the people of Scotland sold their right of free Parliamentary speech for a mess of pottage. The combination of executive and legislative functions under David II. proved too heavy a burden for the Estates to bear. It fell most heavily, of course, on the burgesses and the smaller freeholders of the counties, all of whom were entitled to sit. So we find it set forth in the record of a session of the Estates held at Scone in 1367 that, as the meeting was held in the autumn, certain persons were elected to hold the Parliament, and permission was given to the rest to return home and attend to their own affairs. Next year at Perth the process was repeated, the pretext alleged being the inconvenience of the season and the *dearness of provisions*, and the delegation was this time divided into two committees—one to treat of the general affairs of the kingdom, the other to sit on appeals from the inferior courts. And in 1369 the precedent was finally and irretrievably confirmed, when two committees were appointed, one to hear appeals, pleas, and complaints, the other "to treat and deliberate on certain special and secret affairs of the King and kingdom, previous to their being brought before the whole Parliament, since it is not expedient that the whole body should assist at a deliberation of the kind, nor be kept in attendance." This was the genesis of the famous *Committee* or *Lords of the Articles* and of the *Judicial Committee* or *Lords Auditors*, who ultimately became the Court of Session as we know it to-day. Henceforward the function of the Estates was simply and solely to elect these two committees. The one absorbed the jurisdiction which had originally rested with the King and his Council, of which Parliament was the outgrowth. The other gradually arrogated to itself the whole legislative business and power of Parliament. It was a century and a half after this time before the judicial function was separated from the Estates and confided to an independent body of judges, Scotland in this regard lagging far behind England. The Lords Auditors were appointed regularly every session, and heard not only appeals but causes in the first instance. An element of confusion is introduced into their history by the all but contemporaneous appearance and growth of the King's Secret or Privy Council as a court of justice. We cannot doubt that there was at all times associated with the monarch an inner ring of counsellors. As his "Court" together with the great officers of State grew by degrees into a Parliament, he must have retained about him a smaller circle of friendly nobles, who would attend him in his progresses through the country, and advise and support him when the Estates were not in session. But there is no definite mention of a Privy Council till the year 1398, when Robert III. appointed the Duke of Rothesay as his lieutenant, directed him to be guided by the Estates when they were in session, and by a Council when they were not, and named as Council eighteen members of the Estates. There can be no question but that this was an act of deference to Parliament, and in a sense a sacrifice of the royal prerogative; but there is the fact—and a very significant one it is—that almost from the outset of our constitutional history the Privy Council was virtually a (third) committee of Parliament. We are now entering upon the Stewart period, and of course the Stewarts had favourites. But exactly a century after the commencement of the luckless Rothesay's lieutenancy we find in a statute of Parliament the

King's Secret Council named as *chosen*, and in 1524 a Secret Council of eight was elected by the Estates—all of the party opposed to the Queen. Briefly, then, it may be said that the Privy Council in Scotland was from the first a permanent delegation of the Estates; and we find both it and the Lords Auditors exercising the judicial powers of the parent body. It is impossible to assign to each a separate jurisdiction, for causes that began in the one court seem frequently to have terminated in another. The historian traces with a certain sense of satisfaction the efforts of these very active monarchs, James I. and II., to supersede both by an independent judiciary. It was not, however, till 1532 that a Court of Session or College of Justice, combining their functions, and generally independent of the Estates, was established by James V. Of course, the Privy Council was not abolished, like the Lords Auditors. It continued to play a great part in Scottish history; the Covenanters discovered to their cost that James V. had not robbed it of the whole of its criminal jurisdiction.

The subject of the Committee of the Articles is closely interwoven with the history of the attempts of the Jameses to reform the constitution of Parliament itself. It is probable that from the first each Estate nominated its own representatives to sit on the committee. It is certain that in the middle of the 15th century it was representative of the Estates, for in 1471, under James III., the whole power of Parliament was entrusted to a committee of thirty-four members—eight of the clergy, seventeen barons, and nine burgesses, with powers to add to their number; and in 1621 the Lords of the Articles were eight of the clergy, eight nobles, seven officers of State, eight small barons, and seven commissioners of burghs. In the later history of the Scots Estates the mode of election was an object of intrigue, and the most high and mighty Prince, James VI., spent all his perverse ingenuity in securing by means that we should nowadays term gerrymandering the choice of a committee to his liking. His wiser predecessor, James I., turned the ideas he had acquired in England to a higher purpose. He strove hard to introduce into the country contingent of the Estates the English system of representation. The small freeholders still grudged the expense of attending Parliament, though, for all we can learn, their attendance, when they gave it, was limited to the time necessary for setting the delegations going. James sought to afford them relief while, at the same time, aiming at conforming his Parliament to the English model. He got an Act passed—the records, by the way, from the time of Robert III., are written in the vernacular—providing "That the smal baronis and fre tenandis nede nocht to cum to Parliamentis nor general consalys, swa that of ilk sherrefdom thare be sende chosyn at the hede court of sherrefdome twa or ma wis men efter the largeness of the sherrefdome . . . the quhilk salbe callit commisaris of the schire." The attempt was a failure. There can hardly be any doubt that James meditated a division of the Estates into Houses, for this Act empowers the "commisaris of the schire" to choose a wise and expert man "callit the Common Spekar of the Parliament." James, however, was in advance of his time. He was certainly ill fitted to his environment. The great nobles, although assenting in Parliament to his numerous innovations, could and did oppose an enormous force of inertia to the practical application of them. Anyhow, it was not till 1587 that the representative system was applied to the counties, and the intervening period is notable for the number of Acts passed raising step by step the amount of fortune below which the small barons were not obliged to give personal suit and presence in Parliament. The Act of 1587 fixed the representation at a qualification of "forty shillings land in frie tenandrie haldin of the King," and from this time forward representatives of the freeholders formed a considerable proportion of Parliament, in which they were treated as a separate Estate, although theoretically they formed a portion of the baronage. And both they and the commissioners of the burghs were paid, the barons being "stentit" for the support of their deputies. In 1661 the allowance was five pounds Scots for each day of attendance, and, as the Estates were at that period somewhat addicted to show in dress, it was found far from sufficient. This year the voting qualification was changed to "ten chalders of victual, or £1,000;" in 1681 the franchise was given to those "in possession of a fourty shilling land of old extent," or "infeft in lands liable in public burden for Her Majesty's supplies for £400 of valued rent."

It seems at first sight strange that at once so great pains should have been taken to secure a large attendance of the Estates, and that attendance should have been found so heavy a burden, if the power of the Estates was limited to the selection of delegations. We are shut up to the conclusion that what is known to have been the latter-day practice of Parliament was introduced earlier than the records show. That is to say, the Estates did not disband immediately after the selection of the Lords of the Articles and the Lords Auditors, but waited on in Perth, Scone, Edinburgh, Linlithgow, or wherever the Court and Estates happened to be—for our Parliament was long a peripatetic body—till the Lords of the Articles had prepared all the statutes of the Session, and then proceeded to vote upon them in the mass. That was the practice of the later days of the Scots Parliament. In 1633, we are told, by which time the selection of the only surviving delegation had come to be a flagrant job, the King and the Lords of the Articles sat from the 20th to the 28th of June, on which day the King, with the whole Estates convened, concluded the Parliament, the whole Acts being read and voted by the three Estates.

The burgesses must have tired of the privilege and burden of attending the meetings of the Estates at least as soon as the small barons. All through the 15th and 16th centuries they shirked their Parliamentary duties. They had their own Parliament of the Four Burghs, which, at a meeting at Stirling in 1405, invited the other burghs to send deputies to it. By 1529 it had, somehow or other, rid itself of the King's Chamberlain, its ancient president. It continued to regulate the rights, privileges, and duties of burgesses, and assumed further and more extensive powers. It controlled Scottish merchants abroad, sent commissioners to foreign Powers and commercial communities, entered into treaties with these, claimed the right to nominate the Conservator independent of the Crown, and helped to defray the expenses of Ambassadors. It exercised an incalculable influence on the legislation of the Estates. The burgesses apparently rarely attended Parliament except when taxes had to be fixed, when they were both eager to be present and anxiously sought after. Once the proportion to be raised by the burghs was fixed by the Estates, the Burgher Parliament allocated the amount among its constituents. It was always exceedingly jealous of any encroachment upon its prerogative by the superior court. So late as 1650 we find the Convention of Burghs expressing a fear lest Parliament, business of great importance being on, should order the Burgess Commissioners to "stay from" the approaching Convention; so the burghs, to save their liberty and privileges, adjourned the said meeting themselves. It was by an order of the Convention, unsanctioned by Parliament, that the number of representatives from each burgh to the Estates was reduced, in 1619, from two to one.

Nothing could be more astonishing to the student of history than the persistence of Parliament all through the troubled times of the Jameses. It was the heyday of "Bands"—those combinations of impracticable nobles for self-defence and aggression which played so large a part in Scottish history. The Executive was weak, and the numerous Acts for the repression of disorder were little better than wordy denunciations of evils with which the central authority was unable to cope. Parliament was very often a mere clique, and was either in agreement with the Crown or else was clever enough to clothe its disloyalty with an appearance of constitutionalism. It has been well said that there was no room for the growth of an Opposition in Scotland, seeing that all that the "outs" who wished to be the "ins" had to do was to kidnap the monarch and set themselves up as the true Estates of the Realm. Yet, however it was constituted, amid wars, foreign and civil, Parliament continued to make a very steady output of legislation. Lawyers pay no heed to the statutes of any reign before that of James I. Here the Scots Acts, professionally so called, begin.

The reigns of the Jameses gave birth to some of the best and worthiest legislation that Parliament ever initiated. Serfs were emancipated in Scotland a hundred years before they got their freedom in England. The Estates strove hard and long to establish tenant-right. Following up a statute of 1401, which allowed an evicted tenant a year's grace if he repledged his lands within forty days, the Estates under James II. ordained "for the safety and favour of the puir pepil that labouris the grunde, that all tenants having tacks for a term of years, shall enjoy their tacks to the ish of their terms, suppose the lords sell or annaly their lands." There is, indeed, no evidence that this Act, or any of the similar Acts that followed it, were generally obeyed. Parliament was, in those times of storm and stress, no less than in the times preceding the reign from which Scotch statute law dates, more a body registering abstract resolutions than a legislative assembly in the English sense. So we cannot tell of what avail were the efforts of the first two Jameses to improve and foster agriculture, or what measure of obedience was given to the law of James IV. ordaining barons and freeholders to send their sons to Grammar Schools. But it is something that in the midst of the constant struggle between the central authority and the lawless earls, who were constantly denounced but could hardly ever be checked for maintaining large bands of followers, while "Bands" continually strove with "Bands" for the mastery and for possession of the figurehead of the monarchy, Parliament was able to give attention to such matters as agriculture, education, and commerce. Education, indeed, seems to have been, as it were, native to Scotland. In the earliest records of the beginning of the 12th century we discover traces of the rector or master of a Grammar School, and the Chancellor of each diocese is found exercising supervision over all the schools in his diocese. In the first authentic list of burgess members of Parliament a rector finds a place. And now at the end of the 15th century the Estates require barons and freeholders of substance to put their heirs to the Grammar School at the age of nine, and to keep them there till they "be competently founded and have perfect Latin; and thereafter to remain three years at the schools of art and jure, so that they may have knowledge and understanding of the laws." St. Andrews University was then 86 years old, Glasgow 46; Aberdeen was just founded, and Edinburgh was undreamt of. If commerce made little progress from the War of Independence, which ruined a comparatively wealthy country, to the Reformation, it was not for want of parliamentary nursing. Restriction, privilege, protection were the "o'erwords" of commercial legislation in those days, as for many a long day afterwards. A commercial treaty was struck with Holland in 1427. In time of dearth Parliament encouraged strangers to bring in grain. The Parliament of 1467 ordained that none but burgesses should traffic out of the kingdom, and laid down a set of shipping regulations, including a sort of "manning scale" and an ordinance forbidding masters to sail their ships during winter. The Estates in the 15th century were specially concerned about the private life of the people. Drinking was forbidden in the burghs after nine at night; if the bailies were remiss in enforcing the Act they were fined a shilling. Hospitality was much abused by roving persons who outstayed their welcome; so inns were ordered to be erected, and travellers were ordained to stay in them. Sumptuary laws were most precise and detailed. Silks, costly scarlet, and furred fineries were barred to all but the upper classes. Women were forbidden to wear tails of unbecoming length to their gowns, or to cover the face with a kerchief; "Keep clear of all Turkish muffling" was the stern injunction of the Estates. A meeting of Parliament must have been a gay sight even at that time, when there was no "riding" from Holyrood to the Tolbooth. But if a year's rent was not spent then in horse-graith and harness, it is easy to understand how the expense of the official dress may have had an adverse effect on the attendance. By an Act of 1465 earls were commanded to use a mantle of brown grained cloth, open in front, furred with white, and lined before a hairsbreadth with the same, reaching down to the belt, stied with similar furring, and with little hoods upon the shoulders; and the dress of barons and burgesses was only a little less rich and expensive.

It was a thin Parliament after Flodden, but the Estates now, as ever, did not miss the opportunity offered by the minority of the monarch. They took Albany for regent, but they exacted, or attempted to exact, due service from him. They gave him four months' leave to go to France. He outstayed his term three years. Then they sent him an ambassador to declare that "if my Lord Governor be not in Scotland or midsummer the Estates are 'to declare him unable ever to come to the Crown of Scotland in na manner;'" also, to declare him "infâme," take the governorship from him, and break with France. A pathetic note of regret is added for the breaking of "the auld, lang, and true friendship has been betwixt France and Scotland." Wolsey played to some purpose on the jealousy here revealed. We have no reason to be proud of the Parliament of that day, which distinctly allowed itself to be overreached by Henry VIII. and his clever statesmen. It was when the Estates were governing the country directly that Scotland was detached from France. When the youthful James V. was set on his throne the Estates were almost obsequious in supplementing with forfeiture his half-natural, half-inhuman persecution of his stepfather, Angus. But in the early part of the 16th century there was no marked development of the power or functions of the Estates. They were alternately inquisitorial and careless of duty. The Parliament of 1535 permitted the Lords of the Articles to make Acts apparently without reporting to the whole body of Parliament, and even to impose taxes. Yet the Estates were very stern in the repression of crime. In 1551 an Act was passed against swearing, which was declared to be of daily and hourly occurrence among high and low. The seed of the modern Poor Law was sown by the Act of 1535, which ordained that the poor who could not work should be supported by the parish in which they were born. We cannot go into the relations of the civil power and the old Church, only it may be noted that the Estates and the Church continued to be nominally hand and glove up to that day on which the Reformation ostensibly came to pass in Scotland. It will be recalled that it was James V. who instituted the Court of Session practically as we know it now. He modelled it on the French Parliament, and it was not, therefore, wholly stripped of its legislative function, although it ceased to be a Committee of the Estates. In the Acts of Sederunt which are passed from time to time by the Senators of the College of Justice we see a survival of more real and extensive powers which the Court of Session claimed and exercised for some time after its erection. This was not the only model that James brought from France. He envied the autocracy of the French Monarchy, and just as his internal policy consisted mainly of attacks on the great nobility and aggrandisement of the Church which countenanced him in his profligacy, so we cannot doubt that it was his and his mother's craving for absolutism that brought in this century the Privy Council to be virtually independent of the Estates. The process must have been gradual, but, like most of the interesting points in Scottish constitutional history, it is only to be guessed at. Thus, in the third decade of the 16th century we find the Estates still electing the Secret Council at the same time as the Committee of the Articles. At one meeting four members were appointed to the Council; at another, in 1524, eight, all of the party of the Queen. We cannot tell whether the Council retained the power to add to its number, or when, if at any time, the Crown openly asserted its right to name its own Privy Councillors. But during this century the Privy Council did many arbitrary acts as the Executive, and in a time when Parliament was more often a clique or a body of partisans than a representative assembly (in the sense that the Scots Parliament was ever representative), it is easy to understand how the Privy Council came to be, intermittently at least, all-powerful. As a court of justice the Privy Council always assumed a position of superiority to the Court of Session; it was, in a manner, like the English Chancery, a court of equity, but it did not, any more than the Court of Session, deviate from the principles of the civil law as contained in the Pandects and the Institutes and the feudal law. Mary's deposition gave the Council a notable opportunity. The Estates were not in session, so a proclamation was issued commencing, "We of the nobility and Council," giving instructions to the courts of law in a tone of absolute command, and ordering the Court of Session to administer justice notwithstanding any tumult or bruit. James V. was sometimes dictatorial, sometimes suppliant to the Privy Council. Mary's Privy Council once regulated the price of provisions for her Court when she visited Jedburgh; it also performed acts which she detested, using her name in the formal manner which we recognise nowadays as strictly constitutional.

It must not be supposed, however, that the power of the Estates was on the wane at the time of the Reformation. However they may have been constituted, they were in the troubled times the Government of the country, retorted the insolence of Henry VIII. upon himself, and represented, as faithfully as if they had been popularly elected, the resentment of the whole people against English interference. The Estates appointed Arran regent. The Estates deposed Arran, and put Mary of Lorraine in his place. The Estates gave the Dauphin the crown matrimonial "to last during the marriage allenarly." When the Lords of the Articles gave Mary of Lorraine a standing army, there was a meeting of three hundred of the principal territorial magnates at Holyrood to protest against the act; that was to all intents and purposes a convention of the Estates, and it had its way. Mary of Lorraine intrigued among them, packed her Council with Frenchmen, and, having manifestly the keenest brain in Scotland of the time, compelled the Scots, half-unconsciously, to make their country a province of France. But it does not appear that she attempted to dispense with a Parliament altogether. What she did in the name of Scotland was done with at least the appearance of constitutionalism. It was really the Parliament of Paris that ordained that Mary Stuart should come of age when she entered her twelfth year, but the Scots Estates, whether bribed by the French King or not, ratified the deed in an entirely regular manner.

We discern the approach of the Reformation more clearly in the records of ecclesiastical councils than in those of Parliament, though it is customary to regard the great change as having been brought about by a single act of the Estates. Perhaps, however, we should not expect to find in the packed Parliaments of these days very striking evidence of the growth of that anti-French feeling which contributed so much to the overthrow of the Church in Scotland. Almost up to the year 1560 the Estates were on the side of the Church, while the Church was denouncing if not reforming its own abuses. In 1525 an Act was passed forbidding the importation of Luther's books and the spread of his opinions. In 1541 an Act was passed to prevent the spread of heresy, and to make it a capital crime to question the authority of the Pope. Once, two years later, a spasmodic outburst of Protestant and pro-English feeling led to the enactment of a statute permitting the general use of the Bible in the vulgar tongue. But Beaton was not long in "collaring" the regent and drawing the Estates back from the perilous path they seemed about to enter. That very year an Act was passed for the summary dealing with heretics. The Privy Council ordered a proclamation to be made at every market cross threatening punishment to all who should "invaid, destroy, cast down, and withheld" abbeys, churches, monasteries, and nunneries. All the while the Church, at the same time as it was hounding on the civil power against heresy, was taking steps to reform itself, and proclaiming its own rottenness. The statutes of a Provincial Council held at Edinburgh so late as 1549 are prefaced by a confession that "the root and cause of the troubles and heresies which afflicted the Church were the corruption, the profane lewdness, the gross ignorance of Churchmen of all ranks," and the Council did its best to suppress these scandals. More significant than the signs of the Church's awakening to its sign is the approval given by a Council in 1552 to Archbishop Hamilton's Catechism, which expounded the doctrines of the Roman Catholic Church in the vernacular.

Meantime hatred of the French domination and hatred of the Church increased with equal heat. Looked at from the constitutional point of view, the Reformation was like every revolution, small and great, in the history of Scotland, the work of a band or league. In the struggle between the Regent Mary and her French Privy Council on the one hand and the Lords of the Congregation on the other, which did not terminate till the regent's death, the Estates as such scarcely make an appearance. For some time prior to the Reformation the Government of Scotland must have been an oligarchy, composed of the regent, her French Councillors, superior clergy, and the Catholic lords. A regular meeting of the Estates was an impossibility, for the simple reason that the majority of its constituent parts were in revolt. The 1560 meeting of Parliament, its remarkably large size, its debates and acts tell a significant tale of the irregular form of rule from which it delivered the country for a time. It is not a little humiliating to reflect that the revolution effected in this year—we do not refer to the ecclesiastical upturn—was primarily the work of foreigners, who made peace for Scotland while she was forced to stand idly by. The Parliament of 1560 was summoned under the Treaty of Edinburgh, which was concluded by French and English commissioners alone, no Scot being admitted to their councils. England bested France, and made the Lords of the Congregation masters of the situation. The Council, indeed, that was set up by this treaty to rule Scotland in the absence of Queen Mary was dominated by nominees of the Crown; seven members were to be chosen by the Queen, and only five by the Estates. But in the fact that the nominees of the Estates were recognised as virtually the representatives of Protestantism and of the Lords of the Congregation we have conclusive evidence of the triumph of the late rebels. The composition alone of the Parliament which met on the 10th of July proved that the revolution meant, among other things, a rebound from an unconstitutional method of government, or at the least a government in which the Estates had played but an insignificant part. Such a gathering had not been seen for many a long day, if ever. There were present the Duke and thirteen earls, the Archbishop of St. Andrews and five bishops, nineteen lords, twenty ecclesiastics, as well abbots as priors, the commissioners of twenty-two burghs, a hundred and ten barons, and many others. Note that a system of representation had not yet been applied to the counties. It was now, and for twenty-seven years more, open to every freeholder to take his seat in Parliament. We have explained why the smaller landowners did not avail themselves of this privilege. Now, when the great issues to be dealt with drew them to Edinburgh, their unaccustomed presence was actually challenged as unconstitutional, and their ancient right had to be vindicated before the Estates. There is no Parliament in Scottish history that so awakens admiration as this one. It exhibited, in its very preliminary debates, a regard for constitutional form, and for the doing of all things in decency and order, that formed a pleasing augury for the peace and good government of the kingdom. A whole week was spent in discussing these and other points of order, including the legality of the assembly itself, which was not summoned by a sovereign, or presided over by a representative of the Crown, but simply sat in compliance with the terms of a treaty—albeit King Francis at the time did not dispute the legality of the Parliament. Though the Estates took for their motto "Thorough," Knox and his colleagues drew up a Confession of Faith in four days. The Lords of the Articles passed it, after hearing Knox and Willock for and certain bishops against the Confession, and transmitted it to the Estates, who ratified every article by a succession of overwhelming votes. "I never heard," wrote Randolph to Cecil, "matters of so great import, neither sooner despatched, nor with better will agreed to. In three Acts, passed in one day, the Estates abolished the jurisdiction of the Pope, condemned all doctrine and practice contrary to the new creed, and forbade the celebration of mass, the penalty attached to a third hearing of mass being death." This Parliament evinced no great concern about the royal approval or disapproval of its proceedings. It took the initiative in everything, and even sent an embassy to England to arrange for a marriage between Elizabeth and the Earl of Arran. But the unmitigated triumph of the Reformers was short-lived. Mary's arrival set back the current of Protestantism. She did not summon a Parliament for two years after her arrival in Scotland, and when she did call one together she was able to make it abide by the three years' truce. The Estates, which met in 1563, merely secured the noble appropriators in their possession of the Church lands, but left the Acts of 1560, which established Protestantism, unconfirmed. It was not till Mary was in Lochleven, and the Assembly had given a lead in forfeiting her, that the Estates met in 1567 and gave these Acts final sanction. In the long struggle between the Mary and James factions Parliament as such bore a very small share. The rival parties held rival Parliaments. Mary's supporters kept their hands on the insignia. We do not know with what symbols the coronation of the young King was carried out, but when at the 1572 meeting of the Estates Angus carried the crown, Argyle the sceptre, and Morton the sword, we are told that these were made of brass and double overgilt with gold. But the fight was entirely between two parties of nobles; the only portion of the constitution that had any permanency was the Privy Council.

When, however, the land came to be at peace, the Estates once more asserted themselves. In the struggle between the civil and ecclesiastical powers they took their stand upon their ancient supremacy. Thus ran an Act of 1584:—"The King's Majesty, considering the honour and the authority of his Supreme Court of Parliament, continued past all memory of men unto these days, as constituted upon the free vote of the three Estates, shall stand and continue in their own integrity, according to the ancient and lovable custom observed in times bygone, without any alteration or diminution." Next year they boldly asserted and exercised their indefeasible right to conclude peace and war. The Estates were not in session when the English Government brought up the question of a league, but the Privy Council were not allowed to transact this piece of business, at any rate. A number of members of Parliament formed themselves into a committee, drafted an arrangement, and formally, though with full consciousness of the partial irregularity of the proceeding, authorised the King and his Council to represent the Estate of Scotland in concluding the league.

The Union of the Crowns did not, strange to say, magnify the office of the Estates of Scotland. They gained no increment of power by the absence of the monarch in England. The King's Commissioner took his place in Parliament, and the function of the Privy Council did not at all events suffer any abridgment. James desired to have a Parliament after the French model. The system of representation was yet in its infancy, and for that and other reasons his accession to the English throne seemed to pave the way to the attainment of his wish. He may or may not have been speaking the truth when he said, in his famous speech at Whitehall, in 1607, that in the Scots Parliament none could speak without the Chancellor's leave, and any could be silenced by the Chancellor. But he was quite within the mark when he declared—"I can assure you that the form of government there is nothing inclined to popularities." He added that he could veto the consideration of any Bill, and that whatever he disliked in Bills that were passed was erased. There is good reason to doubt whether he was, constitutionally or actually, so omnipotent in the Estates as he professed to be, but after the Union he had unquestionably remarkable success in moulding the Scots Estates to his will. He had triumphed early over the Church. He was probably now reaping the harvest of that victory, in which he had the sympathy of the upper classes. He had thrust bishops into the Estates, though indeed few Parliaments since the Reformation had wanted representatives of the old Clerical Estate—not necessarily clergymen—kept there avowedly for the purpose of preserving the ancient form of the constitution. When he visited Scotland in 1617 the Estates did whatever he bade them do. He succeeded in persuading, not only the Estates, but a General Assembly, to pass the Five Articles of Perth; the Estates, we are told, met in unusual strength to place on the statute-book this the only Act that appears there dealing with matters of religious ceremonial.

Charles I. seemed at first likely to be as fortunate as his father in subduing his ancient kingdom to his will. The Estates granted him an income-tax as an aid to his brother-in-law, the Elector Palatine. But when he came down to Scotland and took part in a meeting of the Estates in 1633 he found himself straightway in collision with his subjects, and the long struggle between Parliament and the prerogative began. The nobles were offended by the resumption of the Church lands. The other Estates were estranged by an innovation in the mode of electing the Committee of the Articles. In this Parliament the prelates chose eight nobles, the nobles eight prelates, and the sixteen thus elected chose eight from the lesser barons and eight from the burgesses. An Opposition came into existence for the first time in the history of the Scots Estates; and Charles, for the first time in the history of the monarchy, attempted to overbear the Estates. He tried to govern Scotland by means of the Secret Council, but the Opposition—or Supplicants, as they were called—would not be suppressed. Within four years they had come very near "rabbling" the Secret Council. As a matter of fact they forced the Council to associate with itself sixteen representatives of all the Estates. Then came the Covenant, Charles's response to the people's claims—"I will rather die than yield to these impertinent and damnable demands," Charles's first submission, and the "rising of the Scots." When Sion triumphed the Estates had a memorable meeting in 1640. It marked an epoch in the constitutional history of Scotland. There had been a Parliament in the previous year—the first, by the way, that left the Tolbooth for Parliament House—which was a regular meeting of the Estates under the presidency of the King's Commissioner. On that occasion Charles attempted again to pack the Committee of the Articles, causing the lords to choose the members for the other two Estates. The 1640 meeting was held not only without the King's countenance, but in defiance of him. The previous General Assembly had routed out the bishops. Now, it was generally held that a majority of *three* Estates was necessary for the passing of any Act. How could the constitution be preserved without prelates? The Estates solved the difficulty by rearranging themselves into nobles, barons representing the shires, and burgesses. This Parliament adopted the Covenant by an Act, and on its adjournment appointed a permanent Committee of the Estates, to act in the camp as well as at the seat of government.

This permanent Committee of the Estates was henceforward the Government of Scotland. Parliament, representing the nation, was ranged against the King. Though a pretence of submission to the royal authority was kept up, the Estates were once more exercising their ancient function and rule, to which the countenance of the Crown was not absolutely essential. When Charles came down to Scotland in 1641 he found an appearance of peace and harmony, but only an appearance. The Parliament which met him was aggressive, greedy of power, resolute to set the affairs of the kingdom on a firm footing once for all. We stand amazed at the aspect and activity of this Parliament. It swept everything into its net—legislative powers, executive powers, judicial powers. Its output was enormous, judged even by present day standards, for while the session lasted only half-a-year, the number of Acts passed was no less than three hundred and sixty-five. All the rights which the Stuarts had claimed for the royal prerogative were swept away, and the ancient powers of the Committee of the Articles passed with them. At the previous Parliament each Estate had elected its own representatives to the Committees. Now all business was transacted through open Committees, and the Committee chosen to "revise all Articles" was but a shadow of the omnipotent caucus by means of which the Scots had curbed the development of their Parliamentary institutions. The Parliament took upon itself to recast both the Secret Council and the Court of Session, and virtually arrogated to itself the whole of the patronage of the Crown.

At the advent of the second Charles we find Commissioners of the General Assembly co-operating with the permanent Committee of the Estates in the government of the country. Leslie fought Cromwell under the authority of the Committee of the Estates and of the Assembly—especially of the Assembly, whom Scotland has to thank for the disaster of Dunbar. But the day of Parliaments and monarchs, real or tulchan, was drawing to a close. Cromwell prevailed. Scotland was conquered, and swallowed up in the sister kingdom as she had never been before in the whole course of her chequered history. The Protector swept the board of every vestige of a national government. Even the name of Scotland disappeared from the records of the Protector's Acts. Everything was done in the name of the Protector and Council, afterwards of the Protector and Parliament of *England*. Three "Commissioners of the Parliament of the Commonwealth of England, for ordering and managing of the affairs of Scotland," kept state at Dalkeith. A Commission of Justice, made up of four English and three Scottish judges, took the place of the Court of Session. And finally, by an ordinance of the Supreme Council of England, Scotland was "incorporated into, constituted, established, declared, and confirmed one Commonwealth with England," and thirty members were summoned from Scotland to sit in the English Parliament. Twenty represented the counties and ten the burghs, several of the members being Englishmen. The Parliamentary Union, however, lasted only a few months.

The reaction against Puritanism, or rather against Cromwellism, was as marked here as in England. If Charles was able to apply a wet sponge to the political history of the past thirty years, it was with the full assent of the Estates of Scotland. When the machinery of the Protectoral Government fell to pieces there was a permanent Committee of the Estate capable of being revived to take its place. When the Estates met in 1661, it became at once apparent that the old Covenanting spirit had disappeared. This Parliament, commonly known as the Drunken Parliament, from Burnet's testimony that "the men of affairs were almost perpetually drunk" (though the sobriquet is claimed for a meeting of the Privy Council in Glasgow), rescinded all the statutes passed since 1633, restored the hierarchy, and burned the Covenant. A new kind of Privy Council was set up to carry on the government while the Estates were not sitting. It combined the functions of the modern Committee of the Estates and of the ancient Secret Council, and added to them new powers; and it was no longer nominated by the Estates, but by the Crown. Two years later the Committee of the Articles was appointed again, and the subservient Parliament adopted the first James's method of election, by which the choice of members could practically be kept in the hands of the Crown. The bishops chose eight nobles, the nobles eight bishops, and these sixteen together chose eight county members and eight burgesses. Charles had only to command, and he was obeyed. The Estates gave him a free hand in the remodelling of the kingdom. The Court of High Commission was reinstated. Episcopacy was restored and the King was made head of the Church, the Act running that "the ordering and disposal of the external government and polity of the Church does properly belong to His Majesty and his successors, *as an inherent right of the Crown.*" The phrase is significant of the pass to which constitutionalism had come in Scotland. So is the complaisance with which the Estates permitted the King to erase a couple of Acts which they had passed, and which had been touched by the royal sceptre. But we need not look to isolated signs for guides to the constitutional history of this time. Its note was the exaltation of the prerogative. The governing classes, as we should call them now, were tools of the King, almost as eager to aggrandise his authority as he was himself. If the Privy Council was hotter in persecution than the Estates, the reason was that persecution was its function; it was not more subservient to the Crown. This dark chapter in the annals of Scotland is only too notorious. One fails altogether to discern a motive for Lauderdale's intrigues for the suppression of the Estates altogether. In the flush of their loyalty they endowed the Crown with a permanent revenue of forty thousand pounds sterling a year. What the Privy

Council dared to do in the way of oppression, exercise of arbitrary power, and assertion of the prerogative when Parliament was not sitting, the Estates were always willing to homologate, even to better, when they were in session. Yet Lauderdale was doubtless serious, and doubtless anxious to please his master when he wrote to Sir Robert Murray, his correspondent at the English Court, "You shall humbly present it to his majesty's consideration how fit it is that when public business are despatched this Parliament be concluded and dissolved, and that this kingdom return to the good old form of government by His Majesty's Privy Council." Good *old* form indeed! Lauderdale's pretext was that "Long Parliaments are more unfit for Scotland than for any other place for public business being done. They can only serve here for creating division by carrying on private interests." They are costly to the members, but "the most heavy burden lies on the King." On the other hand, Middleton, a predecessor of Lauderdale's as Royal Commissioner, tells us that "The Parliaments of Scotland continuing only but eight days, the first day of the Parliament's meeting was taken up in constituting the House and choosing the Lords of the Articles; then did the Parliament adjourn. The Lords of the Articles went about the drawing up and preparing such Acts as were to be passed in that Parliament. That being done, the Parliament had its second and last meeting, in which day all Acts were read, debated, voted, and passed." It is hard to discover in this procedure any possible opening for the creation of division by carrying on private interests, or, indeed, anything but a skilfully-devised machine for registering the edicts of the King's Ministers.

In olden times King and Estates agreed together in the way because the monarch dared not defy his people, or such of them as gathered round him in the great Council of the nation. Now discord was banished by the subserviency of the people to a monarch of limitless ambition. There is no better proof of the profligacy and degradation of the governing classes than the unprecedented time that Scotland endured tyranny in this century. Charles's first Parliament was held in 1661. The Act of Succession was passed in 1681. When we survey the history of these twenty years we are astounded to discover how at the close of this period the Estates were crawling even more humbly on their bellies before the merry monarch than they were at the beginning of it.

Before James the Estates grovelled with equal humility. He was to them one of a "sacred race of glorious kings"—the number of whom was specifically stated as one hundred and eleven—to whom, under the divine mercy, the nation owed two thousand years of happy government, by "the absolute authority wherewith they were invested by the first and fundamental law of our monarchy." They revelled in declarations of submission to the "King's sacred, supreme, absolute power and authority." How alien such sentiments were to the minds of the great mass of the people was soon to be disclosed. It was not very long before James discovered that even the dominant party was not unreservedly at his beck and call. The Lords of the Articles passed his Bill for repealing the penal laws against Catholics. The Estates were ready enough to renew the Test Act, and make attendance at conventicles an act of treason. But they haggled over the Catholic Relief Bill. James, of course, was not to be baulked by such a trifle. The Stuart prerogative was ready to his hand, and the Privy Council did what he wanted, proclaiming that the King was accountable only to God, and therefore they must obey him. In fact, during his short reign the Estates were but a shadow, though among their Acts was that which inaugurated the strict system of entail which is peculiar to Scotland. The King's love of arbitrary power grew by what it fed on. When it came to a promiscuous issue of indulgences by the Crown, "by our sovereign authority, prerogative royal, and absolute power, which all our subjects are to observe without reserve," when the people saw that the Pope once more ruled over them through his vassal, James VII., the worm turned. Even his faithful Privy Council deserted him before the end. The Convention of Estates that assembled after his flight was Protestant and Orange in as overwhelming a majority as ever his Parliament had been Jacobean and subservient.

Probably we may take this sederunt of this Convention as an average for the time. There were present then nine bishops, forty-two peers, forty-nine county members, and fifty burgesses. In this Convention the ancient spirit of the Scots Estates seemed to revive as if by magic. It assumed as of right the power to dispose of the crown, and William throughout treated it as if the choice of a monarch might fall upon anyone quite as legitimately as upon himself. Of course, it offered the crown to William and Mary; and until the King could appoint a Ministry and call a Parliament, the Convention, following the old Scottish precedent, governed the country both as Parliament and as Executive. Once William had turned the Convention into a regular Parliament, it became apparent that the reaction from servility to independence had been too violent. The men who under the late Stuarts had been crushed to the earth by the tyranny of the throne and the courtiers rioted in the assertion of their rights, real or imaginary. The Revolution was scarcely established before an Opposition arose in the Estates, and that an Opposition which outweighed the

Government party in numbers and influence. William and his Scots Parliament first came to loggerheads over the Committee of the Articles, and then over the veto, and a compromise was in the end arrived at. The Estates on their part passed from the question whether Acts once approved by them, but not touched with the sceptre, required to be reintroduced in another session before they could be submitted a second time for the royal assent. The King on his side ultimately yielded everything, gave up the Committee of the Articles, and came to a compromise on the subject of the veto. Henceforth the Estates were "a free Parliament" to heart's desire. There was no longer a fixed Committee shaping all the Bills submitted by the Government and presenting them only for a final vote—aye or no—to the Estates. Committees were appointed from time to time to examine Bills. They were, like the old Lords of the Articles, representative of all these Estates, and officers of State might attend them and enjoy the privilege of moving and speaking, but not voting. In its brief day of freedom the constitution of the Scots Parliament was similar in several aspects to that of several modern Continental legislative chambers.

The Scots Parliament had always concerned itself intimately with affairs of trade and commerce. It was commerce that was its undoing. The legislation of the 17th century is full of Acts dealing with the maintenance and discipline of the poor, with the grant of privileges to commercial companies, with monopolies and restrictions of trade. The Revolution in a manner substituted business for religious controversy as the staple interest of the people. Civil war, religious strife, persecution, and misgovernment had half ruined the nation, and the Parliament was no sooner made free than it was faced by the tremendous problem presented by a vagrant, lawless, unprofitable population, numbered by the hundred thousand. This was a natural stimulus to commercial legislation. Parliament felt itself bound to look abroad as well as at home for means of restoring prosperity to the people. But the moment it set its hand to practical work for the extension of trade it came into collision with English prejudice and monopoly. We need not recapitulate the history of the Darien Scheme, or do more than recall that the free trade which Scotland owed to Cromwell was crushed at one blow by the Navigation Act of the first Restoration Parliament in England. Enough to say that it was the quarrels about freedom of trade between the Scots Estates and the English Parliament and Government in the closing years of the 17th century that precipitated the Parliamentary Union, and made that, or some other solution of a hopeless deadlock, inevitable. There were lively meetings of the Estates in those days. The new-found privilege of free speech was enjoyed to the full if not abused. Thus we read of the Parliament of 1701, that "the House went into great confusion, and everybody almost spoke, and the Commissioner spoke several times." At this sitting several members were moved to the bar for their inability to control their temper. Again, "there was a great cry and confusion," and "several hours' discourses, and the cry rose again till they were all, as it were, out of breath, and silenced for some time."

William exhorted the two Parliaments to Union with his dying breath. Anne accepted the legacy. A century and a half had passed since the first pacific overtures for an incorporating union were made by the Lord Protector Somerset. There is a remarkable similarity between his proposals and those which were embodied in the Act of Union. But the freedom of trade which he gratuitously offered to the Scots in 1547 was the main cause of the failure of Anne's first efforts to bring the English Parliament to a reasonable view of the advantages of a junction with Scotland. However, Anne's Ministers succeeded in the end where Somerset failed. What Edward I. and Cromwell could not accomplish by force, what baffled the diplomacy of James I., Charles II., and William, proved possible to statesmen who were not cleverer, and certainly not more scrupulous, but who struck when only a firm blow was needed to weld together two bodies for whom separate existence had become impossible.

The Scots Parliament was never more interesting than when it was debating the signing of its death-warrant. Never was the "ryding" of the Estates up the Canongate and High Street more magnificent than in those days. We think of Seafield's "Now, there's ane end of ane old song," as we picture that splendid cavalcade of burgesses in black velvet, barons, nobles, Royal Commissioner and his suite, the splendour of their apparel increasing with their rank. The limit of space forbids us to deal, even critically, with the long negotiations which preceded the suicidal session of 1706–7, or with the arguments employed on either side in Parliament, or by the great army of pamphleteers to whom the crisis gave an opportunity. Enough to say that throughout all the deliberations of which any record has been preserved it is impossible to discover any proof that the bulk of the men who carried the Legislative Union of Scotland and England were animated by baser motives than the average statesman of to-day. Nor does it concern us to inquire whether a Federative Union would have been a possible alternative to absolute incorporation, whether Scotland would have benefited by the preference of any such device, or whether the difficulties attending the existence of two separate Legislatures could have been got over in time. Lockhart flung charges of venality promiscuously at the Unionists after their triumph and his discomfiture were assured. But his own good faith in bringing these accusations is dubious; their promiscuity further invalidates them; and the positive evidence that the Union was brought about by bribery is wholly worthless.

A *résumé* of the merits and defects of the old Scots Parliament and of its gradual development would be out of place in so short an article. A word or two must, however, be said about the specially good qualities of the statutory law which we owe to its wisdom and foresight. England still desiderates a settlement of her tithe question; Scotland settled hers more than two and a half centuries ago. There is no denying the very remarkable statesmanship of the Scottish Poor Law passed more than three centuries since. It has been fairly enough claimed that subsequent legislation on the subject has merely altered the machinery; it has not deviated from the principles then laid down. It was very late indeed before the Scots Parliament came to appreciate the individual's right to personal liberty. Not till 1701 was an equivalent to the Habeas Corpus Act passed, but its provisions are much fairer and more generous to the accused than those of the English Act of Charles II.; the English prisoner has cause to envy the Scot his privilege of "rinning his letters." We have noted the extraordinary precocity of Scotland in the matter of education. Perhaps Scotland has never properly acknowledged the debt she owes in this matter to the pre-Reformation Church. Most of us, as a rule, are content to boast of the universal system of parish schools established after the Reformation. The machinery of our Sheriff Courts is as ancient as it is admirably effective; no one really disputes the superiority of our system under which the individual is relieved by a public prosecutor of the duty of vindicating the criminal law. The Scottish statute book was never disgraced by the enormous number of capital offences which stained British jurisprudence till the latter half of the present century. It is perhaps a poor apology, but under the *régime* of the Scots Estates there were never more than forty crimes for which a man could suffer death. Scots law more than three centuries ago gave those accused of felony the right to employ counsel to defend them. The provision of legal advice and service for those who cannot pay for it is a well-known feature of our legal system; it is nearly two centuries and a half old. It was the old Scots Parliament that laid the foundation of our banking system, that invented *cessio bonorum* and the Act of Grace, whereby creditors were compelled to aliment bankrupts whom they threw into prison. We have noted the early efforts of the Estates to procure something like security of tenure for the cultivators of the ground; every lawyer knows the superiority of the Scottish system of conveyancing. Considering how few were the intervals of perfect peace which it enjoyed, how it was hampered by its own clumsy forms, by the poverty and indifference of its members at one period, and by the aggressiveness and tyranny of the sovereign at another, the legislative record of the Parliament of Scotland is one that no Scot need be ashamed of.

What Man can Obtain from the Land.

BY P. KROPOTKIN.

THE THEORY OF MALTHUS.

BEFORE we consider the question, "What Man can Obtain from the Land," we must clear the ground from a widely-spread prejudice which stands in the way of all discussions upon this subject.

Since the beginning of this century, up to the present date, it has continually been asserted in this country that, while population has a natural tendency to increase indefinitely, the means of subsistence which it borrows from the soil *cannot* be increased at the same speed. Consequently, there is a constant "pressure of population upon the means of subsistence;" and, unless the territory of the country be enlarged by conquest, or the birth-rate be reduced, or emigration takes place, an ever-growing part of the population will necessarily be doomed to misery: there is neither food nor room for the new-comers. These teachings go under the name of "Malthus's *theory*."

Some fervent followers of these views go even farther than that. They assure us that Malthus has discovered a *natural law*, which may be expressed as follows:—"While the population of a country goes on *doubling* every twenty-five or thirty or thirty-five years, the available means of subsistence cannot be increased during the same successive periods more rapidly than at an arithmetical ratio—that is, as the series of figures 1, 2, 3, 4, and so on. Accordingly, while the population will have doubled four times in 100 years (or in 120 or 140 years), and will thus be *sixteen times* what it was at the outset, the means of subsistence will only have increased *four* times during the same period." The truth, however, is that Malthus has never promoted any "theory;" he has never established any "law;" he has simply expressed an *opinion*, a *supposition*, as to what he "believed to be" the speed of increase of population on the one side, and the speed of human progress on the other side. At the time he wrote his "Essay on Population" (in 1798) he evidently had no materials whatever to judge upon the *possible* progress of mankind, and he knew that. Consequently he only mentioned the two ratios (geometrical and arithmetical) *as a possible illustration of his supposition.*

In the world of science no one would call that a *law*. In economical discussions, however, people are fond of using the language of science, even though they boldly ignore her methods. None of Malthus's followers has ever attempted to confirm his supposition—a guessing about figures—by figures. No one has ever measured the ratio of human progress, nor ventured to foretell its possible ratio in the future. A guessing it was in 1798, and a guessing it still remains.

As regards the laws of increase of population, we must frankly confess the great ignorance of science in that direction. But what we know with certainty is, that the powers of man to provide his food and to increase his well-being have developed during this century at a speed with which no possible increase of population could have kept apace.*

Everyone knows, indeed, that during the last hundred years the productive powers of man in each branch of industry have increased more than ten-fold; in many cases they have increased a hundred-fold, while with the new sources of motive power, and its transfer, we are very far yet from seeing the limits of further progress.

True that in agriculture progress has been very much slower; but it must also be kept in mind that in the European States all that possibly could be done to *prevent* agriculture from taking its natural development has been done by the ruling classes.

With all that, some progress has been accomplished. Leaving aside the United States, where new lands were brought under culture, and this country, which for a number of years was a pioneer in industry, and consequently took no heed of its agriculture—we may take France, whose territory has not increased during this century, and where one-half of the population has remained agricultural.

The conditions for the development of agriculture in France were certainly most unfavourable. Millions of peasants were slaughtered in the battle-fields, and at the present time 800,000 young men are regularly kept idle in barracks. Agriculture was over-taxed to such an extent that from one-third to more than two-fifths of the total income was paid to the State; while the peasants, whose communal institutions were wrecked, were strictly prohibited, until the year 1884, from entering into any sort of associations, be it only for buying seeds and manure, or for making any permanent improvement of the soil![*] What else could be done to paralyse agriculture? In spite of all that, the agricultural progress of France was as follows:—

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* It is well worthy of notice that in order that a population could double in twenty-five years we must combine the highest birth-rate known with almost the lowest death-rate hitherto attained. In some parts of South-eastern Russia, where the population consists almost entirely of peasants (among whom the boys marry at the age of from 18 to 20 years, and the girls marry at 16 to 18 years of age), we find a birth-rate of from 40 to 50 in the thousand. Taking one of the highest birth-rates, *i.e.*, 49, and the lowest death-rate (which we find in Great Britain and Japan), *i.e.*, 19, we have a yearly increase of 3 per cent, which would make a population double in twenty-five years.

	Population.	Area under Wheat, in Acres.	Yield, in Bushels per Acre.	Total Crop, in Bushels.
1789	27,000,000	10,000,000	9	88,000,000
1888	38,000,000	17,000,000	17	312,000,000
Increase.....	11,000,000	7,000,000	8	224,000,000

It thus appears that, while the population increased by two-fifths only (by 41 per cent), the chief means of subsistence, *i.e.*, the wheat crop, increased nearly three times and a half (355 per cent). That means that if the population of France had trebled within the last hundred years, and fifty million absolute idlers were added to the population, the average Frenchman would still have more wheat at his disposal than he had before the Revolution.

But if we take into account the colossal development of market and fruit gardening in France within the last twenty years, its irrigated meadows of recent origin and its green crops, as well as the oily grains and the crops (especially beetroot) which are grown for industrial purposes—we certainly shall be below the truth if we say that the means of subsistence in France have increased, not by 350 per cent, but by at least 600 per cent, and probably more, to say nothing of the food which is or can be imported in exchange for manufactured produce. What would it have been, however, if only a small part of the interest which is now paid every year on a debt of £1,200,000,000 were applied to permanent improvements of the soil, or if the above-mentioned obstacles did not exist? There is not one practical or theoretical agriculturist in France who would not answer this last question by saying that the agricultural production of France would have been by this time twenty times, or more, what it was a hundred years ago.

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[*] It was only in 1884–86 that the French Government permitted the peasants to associate for the above purpose, and to form the agricultural *syndicats*. Some facts relative to the progress of agricultural co-operation since 1886 will be found in an article of mine on "Mutual Aid," in the *Nineteenth Century*, January, 1896.

WHAT MAN CAN OBTAIN FROM THE LAND.

THE WHEAT CROP.

At the beginning of this century the best methods of culture could be found in England, while they were rare in other countries. Consequently, a high opinion of English agriculture was established, and it prevails still—the high average crop of wheat which is obtained in Great Britain (27 to 28 bushels per acre) being often quoted as a token of superiority, especially in comparison with France, where the average wheat crop is only 17 bushels.

At the same time we all know that this country chiefly lives on imported food. Two-thirds, at least, of the agricultural produce which is consumed in these islands is imported from abroad—not only from distant unpopulated lands, but from France and Belgium as well. All auxiliary branches of agriculture are in full decay.

Thus, 1,300 million eggs are imported every year, while a few hundred acres would do to have them at home. Poultry is imported from Russia and Italy; and vegetables are shipped, not only from the Azores—which would be reasonable—but from the over-populated suburbs of Brussels and Paris as well. From whence comes this contradiction?

The fact is that, although good methods of culture are maintained still in this country on a number of farms, the land, as a whole, goes out of culture at a terrifying rate. It lies waste.

Leaving out of our calculations one-fourth part of the aggregate superficies of England, two-fifths of Wales, and three-fourths of Scotland—so much being covered with wood, coppice, mountain, heath, water, and so on—we have in Great Britain a cultivable area (cultivated and pasture) of 33,644,000 acres for a little over 33,000,000 inhabitants. Let us say, for the sake of brevity, that this land is *cultivable*, while the remainder is *not*, although everyone knows that in reality large parts of it could be very well brought under culture. Now, of the cultivable area less than one-fourth only (7,400,000 acres) is under all corn crops; while less than one-twentieth part only (1,417,641) is under wheat, and on this miserable area 27 to 28 bushels of wheat per acre are grown. In other words, suppose you own 100 square yards. Out of them you leave 40 square yards without culture. Then you sow cereals on 13 square yards, and out of them you pick the best 2½ square yards for wheat—1 yard out of each 40 yards you possess—you put upon them all your best manure, obtain a crop corresponding to 28 bushels to the acre, and speak of being able to grow high crops. This is the agriculture of Great Britain. But let us cross the Channel and take France for comparison. There we find—

WHAT MAN CAN OBTAIN FROM THE LAND.

	Great Britain.			France.		
	Acres.	Percentage of Area.		Acres.	Percentage of Area.	
		Total.	Cultivable.		Total.	Cultivable
Total area ……	56,332,000	100	…	130,720,000	100	…
Cultivable area.	33,644,000	60	100	81,543,000	62	100
Under Cereals..	7,400,227	13	22	35,582,000	27	44
Under Wheat ..	1,417,640	2·5	4·2	17,800,000	14	22

We thus see that while the proportion of uncultivated land is the same in France, the cultivable area is much better cultivated. Over two-fifths of it, *i.e.*, over one-fourth part of the total territory, is under cereals; and more than one-fifth part of the cultivable area, or one-seventh part of the territory, is under wheat. The proportion given to all cereals is twice as big as it is in Great Britain, and six times for wheat.

As to the crops, we find that 28 bushels to the acre, and more, are obtained in France *upon an area much larger than the total area given to wheat in Great Britain*, and that the low average of France is due to the fact that wheat is grown in the South of France as well, where it cannot produce more than 10 to 12 bushels without irrigation, and even in Corsica and the Creuse, where the crop is only 5 bushels to the acre.

It thus appears that if in this country we should give to wheat the same proportion of the cultivable area as is given in France (that is, 7,200,000 acres, instead of less than 1½ million), and if the additional crop were only 22 bushels to the acre, it would already nearly cover the yearly imports of wheat.* We must not forget, indeed, that in 1853–60 three out of each four inhabitants of England actually lived on home-grown wheat. But, of course, under the present system of land tenure, wheat will not be grown at home; as the rent and the tithes for each acre upon which wheat is grown attain £1. 15s.,† and an average crop is only 3½ to 4 quarters (28 to 32 bushels), the result is that 8s. to 10s. out of the 26s. to 30s. which the farmer gets for a quarter of wheat must go to the landlord. No wonder that the farmer abandons growing wheat, and that the area under wheat in the United Kingdom, after having decreased from 4,092,000 acres in 1853–60 to 3,819,000 acres in 1874, was only 1,454,170 acres in 1895.

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* Imports of wheat to the United Kingdom in 1894, 14,000,000 quarters; in 1895, 19,074,800 quarters.

† I take this figure from the well-known and excellent article, "Competition in Wheat Growing," in the *Quarterly Review*, April, 1887. It is based upon direct returns given by a number of wheat growers. This figure is above the average; but when only one acre out of forty is given to wheat there is nothing extraordinary that the rent for an acre upon which wheat can be grown should be above the average. As to the low prices at which land is offered now, they are a direct consequence of the great rise in rents previous to 1875 and the subsequent ruin of so many farmers.

The comparison with Belgium is still more striking. Belgium is a small, densely-peopled country, which has 544 inhabitants per square mile—that is, more than England and Wales (497 inhabitants per square mile), and much more than Great Britain (375). Moreover, less than one-fourth part of its population (22 per cent) are given to agriculture, the remainder being given to industry, commerce, and the so-called liberal professions. Belgium, as everyone knows, is, besides, a great manufacturing country, which exports to the United Kingdom not only £1,000,000 worth of food produce, but also £5,500,000 worth of manufactured goods. Its total exports (£56,000,000 in 1888–92) attain at the same time the high figure of £9 per head of population, while the total exports from the United Kingdom, being £240,000,000, make only £6. 7s. per inhabitant.

The soil of Belgium, productive in some parts, is renowned for its unproductiveness in other parts.* As in Great Britain, the cultivable area (cultivated and pasture) covers only two-thirds of the territory. But *nearly one-half of this last* is under cereals, and one-seventh part of it, *i.e.*, nearly one-tenth part of the aggregate territory, is under wheat,† the average yield of winter wheat to the acre being *the same as it is in Great Britain* (28 to 29 bushels). The total result is that, while in Great Britain only 8 bushels of cereals to each acre of the cultivated area are grown, we find in Belgium twice as much, *i.e.*, 16 bushels per cultivable acre. (Figs. 1, 2, and 3.)

However, it must not be thought that Belgium has less cattle than Great Britain in proportion to its territory. We find, on the contrary, that in Belgium twenty-three animals (horses included) are kept on each 100 acres of aggregate territory, while Great Britain has twenty animals only on each 100 acres, and imports

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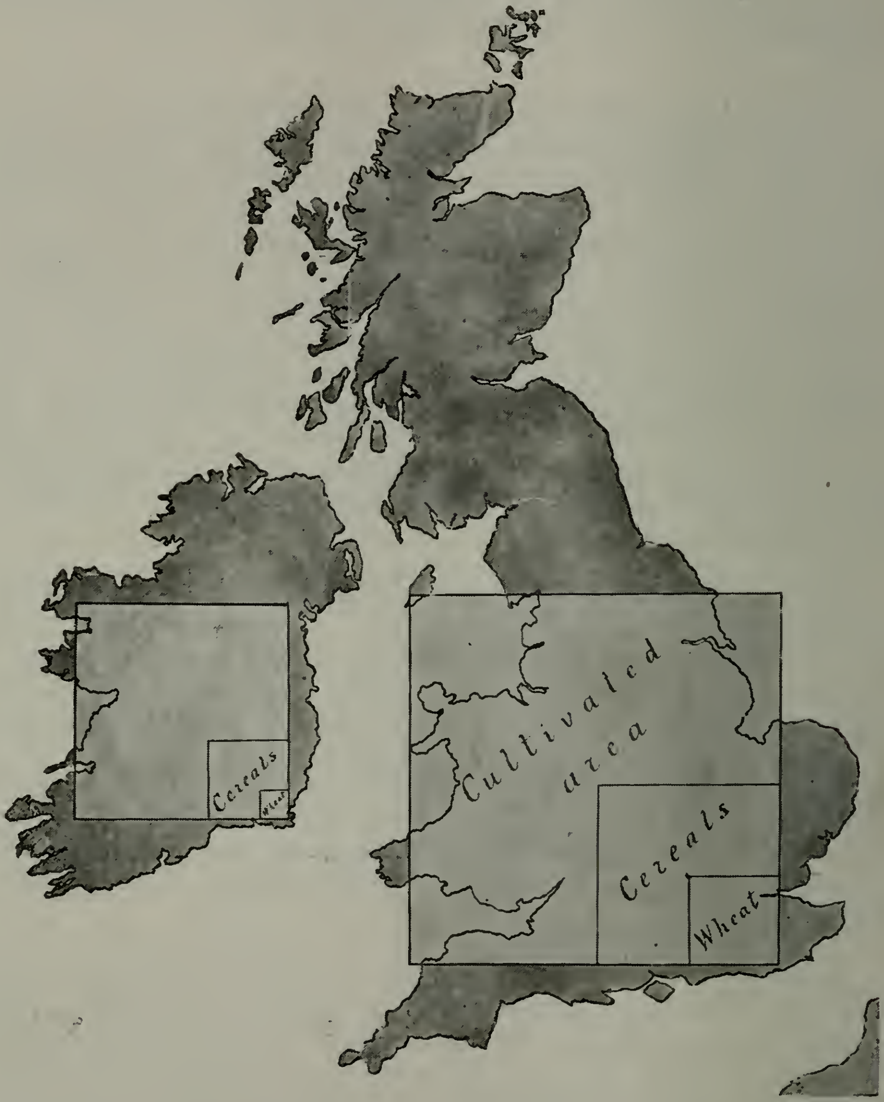
* The sands of the Campine region are a classical example in agriculture. They were quite unproductive. Now they export hay to England.

† Wheat, bearded wheat *(épeautre)*, and wheat mixed to the extent of one-third with rye *(méteil)* cover 880,340 acres.

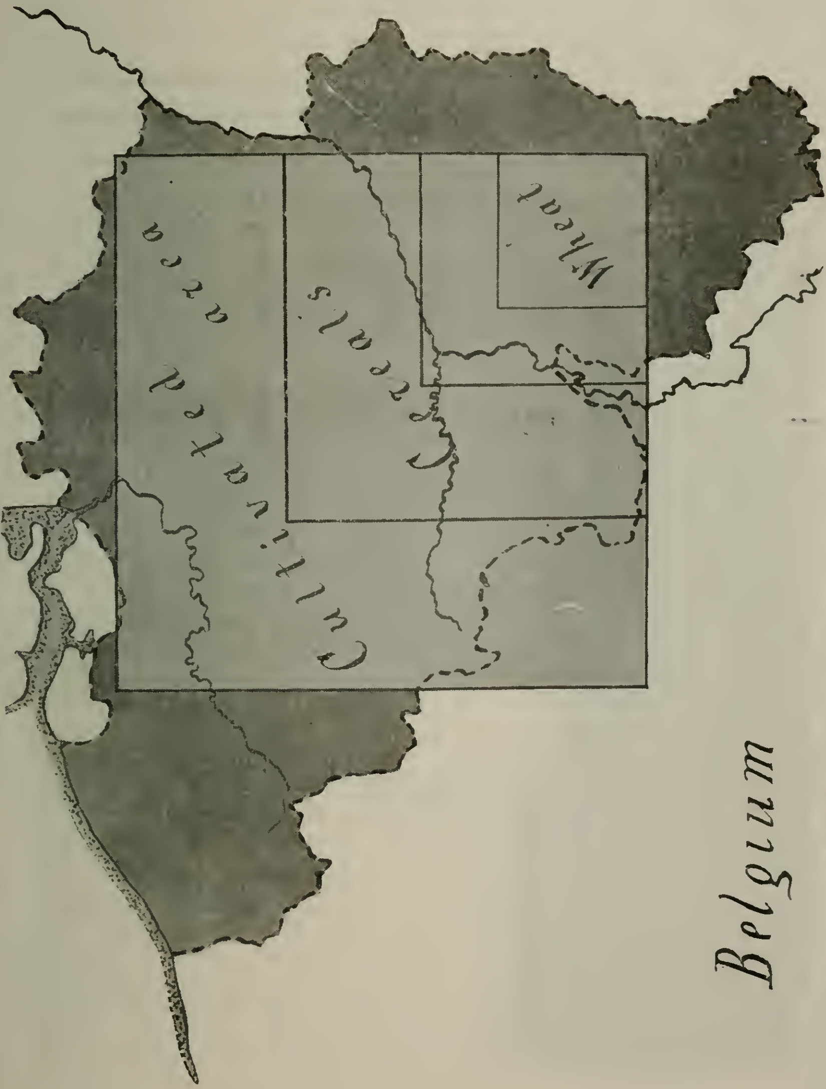
WHAT MAN CAN OBTAIN FROM THE LAND.

Fig. 1.



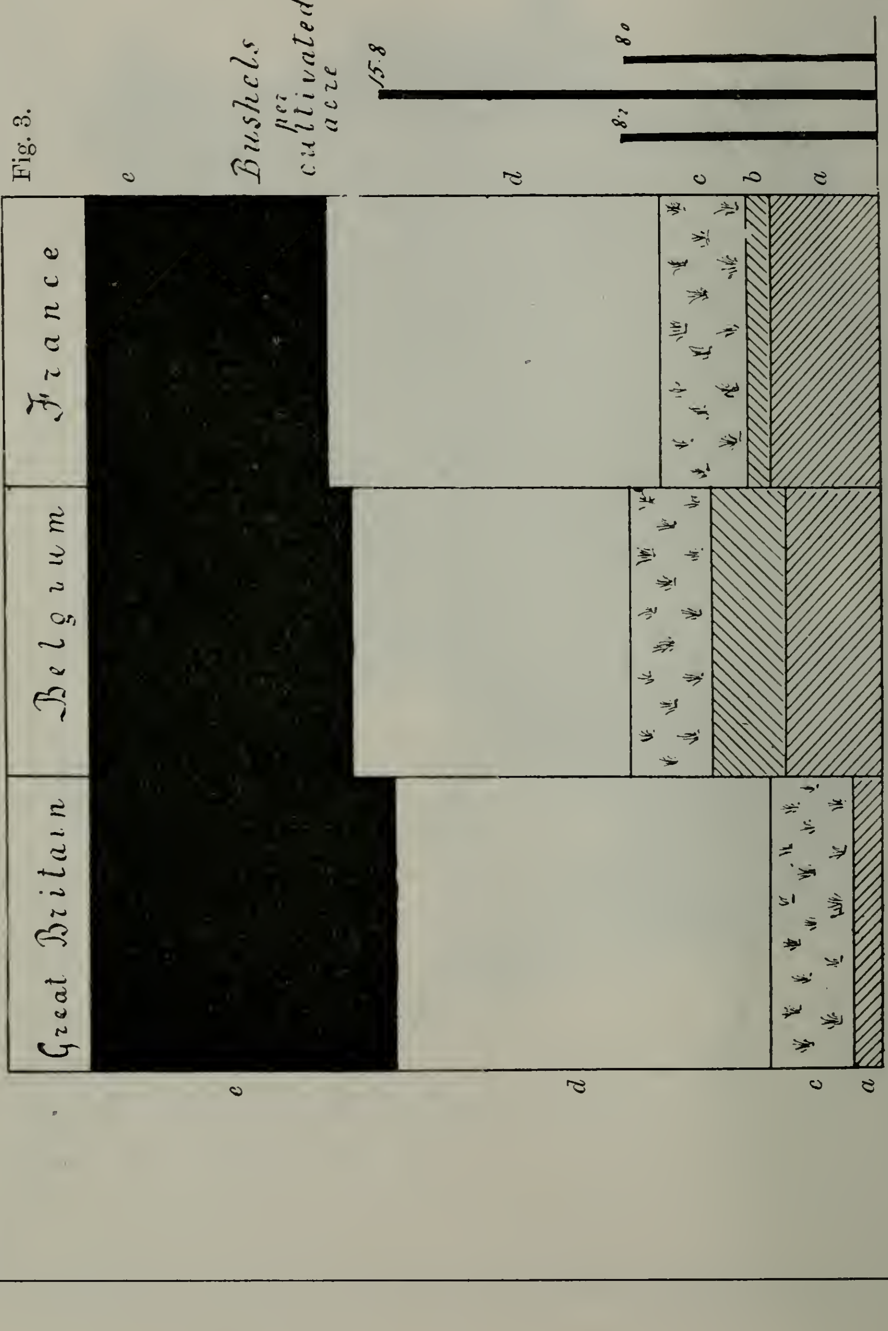
Proportion of the cultivated area which is given to cereals altogether, and to wheat, in Great Britain and Ireland.

Fig. 2.



Proportion of the cultivated area which is given to cereals altogether, and to wheat, in Belgium. (The square which encloses the wheat square represents the area given to both wheat and a mixture of wheat with rye).

Fig. 3.



Proportion of cultivated and uncultivated areas in Great Britain, Belgium, and France. *a*—Wheat. *b*—Wheat and rye mixed. *c*—Other cereals. *d*—Green crops and permanent pasture. *e*—Uncultivated.

considerable quantities of oats, hay, and oil-cake in order to feed them.*

To sum up this comparison, the food-imports to Belgium being only from one-fourth part (bad year) to one-twentieth part of the food consumed, we may say that from 408 to 517 inhabitants per square mile of its population find their food on their own territory, as against 125 in Great Britain. These inhabitants produce more manufactured goods, in proportion, than the English; and they export, moreover, eggs, rabbits, vegetables, fruit, sugar, and spirits; so that if the soil of this country were not starved of human labour, but were cultivated no better than it is in Belgium (by 1,999,300 persons cultivating 5,475,000 acres) the population of this country would grow its own food, without reducing on that account its manufacturing activity or its exports of manufactured goods. But it is self-evident that 2,000,000 labourers cannot properly cultivate 33,000,000 acres. There, and not in climate or soil, is the solution of the enigma.

HOW MUCH LAND FOR ONE MAN'S FOOD.

Bread remains until now the staple food of mankind, and from a great number of estimates it appears that a little over one quarter of wheat, *i.e.*, 8½ bushels, is required every year per head of population.† What is, then, the area which is necessary for growing that quantity of wheat?

Many of my readers will probably be inclined to think that all depends upon the climate and the soil. However, when one passes in review all the mass of facts which are known concerning the various conditions under which wheat is grown, from the

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* It must be borne in mind that one sheep eats much less than one cow. It is therefore the rule to take eight or ten sheep as equivalent to one head of horned cattle. I take eight sheep = one horned cattle. If I took ten the comparison would be still more in favour of Belgium:—

	Great Britain, 1895.	Belgium, 1880.
Horses	1,545,230	272,000
Horned Cattle	6,354,330	1,383,000
One-eighth of the Sheep	3,227,000	45,800
Total	11,126,560	1,700,800
Territory—acres	56,400,000	7,277,000
Per 100 acres	20 heads.	23 heads.
Per 100 animals	507 acres.	428 acres.

† For this country, Sir John Lawes takes even less than that, namely, 5·65 bushels.

62nd degree of northern latitude to the torrid zone, in all sorts of climates and on all sorts of soil; when one sees how the crop can vary *on the very same piece of land*, from 8–10 to 17, 27, 30, and even 38 bushels to the acre, according to how that piece of land is cultivated, and with but a modest expenditure for chemical manure,* one comes to the conclusion that the French peasant has given the best answer to the above question:—"The land is worth what man is worth." *La terre vaut ce que vaut l'homme.* Dry clay and river sand, properly irrigated or properly manured, give heavier crops than the so-called fertile prairies of America and South Russia.

All depends upon the methods of culture. It is evident that in the prairies of North America, where land could be bought at from 8s. to 40s. the acre, it was advantageous to have very large farms, covering scores of square miles, to take what the soil could give for a number of years without manure, and to reduce human labour to a minimum. Accordingly, appropriate machinery was used on a grand scale; the horses were brought from the mountain meadows; and battalions of hired labourers and tramps were marched to camp at the farms for the crop time only. In a fortnight the crop was in, and the wheat was on its way to Chicago, or to Europe, while two or three men only remained to winter at the farm. In this way, notwithstanding the crops being only 15 or 16 bushels to the acre, and less, one man's labour for 300 days (or 300 men's labour in one day) gives the amount of wheat which is required for a year's food of from 200 to 400 adults, and the flour required for 250 adults during one year is obtained and delivered in Chicago at the cost of one man's labour year. Ten hours of work, and half an acre of land, are thus required to produce one man's bread food for all the year.

But this method could not last, as the soil was soon exhausted, and it would not answer in thickly-populated countries. In such countries "intensive" culture has to be resorted to, and *economy in land and labour alike* is obtained by growing heavy crops on the least possible areas.

We saw that the average wheat crop in this country is from 27 to 28 bushels to the acre; and this is about the average on the other side of the Channel, in Northern France and Belgium. In the Duchy of Hesse, which is a land of small farms, 32 bushels per acre is the average crop; while 30 bushels is a common crop in La Vendée, 32–35 bushels is the average for Scotland,

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* This has been done by several wheat growers in the Dordogne at the invitation of Professor Grandeau.

and 33 bushels is habitual in the small farms of the French *département* of the Jura. In a farm (Trappes) near Versailles, 31 bushels per acre was the last fifty years' average.

Still higher crops of wheat are, however, not uncommon. Mr. Prout, in this country, had no difficulty in successively obtaining crops of 40 bushels. Forty bushels are habitual in the Romney marsh, and they are also the average for the allotments about Greenborough.[*] Occasionally 57 bushels were obtained on allotments, and 60 bushels is the highest crop on record in this country.

As a rule, in well-managed farms of France, crops are now considered satisfactory when they are superior to 33½ bushels; in the best farms they are *on the average* 43½ bushels; while in the very best conditions they attain 48, and occasionally 56 bushels.

With "square" wheat *(blé carré)* several farmers of the Département du Nord, in France, obtain *regularly* from 55 to 67¾ bushels per acre, and altogether the farmers' progress in wheat culture may be illustrated by the classical example of a farm of the Thomassin family, not far from Paris (Seine et Oise). Since 1784 four generations of the same family have succeeded on this estate of 667 acres, and their successive crops were as follow[†] :—

Years.	Wheat Crops. Bushels per acre.
1784–1810	20 to 27 (⅓ under fallow).
1810–1836	22¼ to 38 (no fallow).
1836–1862	28 to 46 ,,
1862–1877	36 to 57 ,,

The highest crops on record in France are from 56 to 69 bushels, and Professor Garola saw once, on a farm, 12½ acres of wheat of which the average crop was 70 bushels (4,840lbs.) per acre[‡]—the highest crop known to specialists, always in field culture, being 80$\frac{1}{10}$ bushels.

Taking these highest figures, from 60 to 80 bushels, we can thus say that in the open field one man's bread-food for the year already *may* be grown on one-seventh, or even less than one-ninth part of an acre.

I do not mean, of course, that such crops can be obtained on any land without improving it. There is no such land, even in the fertile prairies of South Russia, which would give such crops. To obtain high crops, *each* soil requires proper cultivation and proper manure.

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[*] Ch. W. Stubbs, "The Land and the Labourers," p. 22.

[†] Risler, "Physiologie et Culture du Blé." Paris, 1886.

[‡] Garola, "Les Céréales," Paris, 1894 (part of Girard and Müntz's excellent "Bibliothèque Agricole").

The effects of *good cultivation* have been fully demonstrated at Rothamsted, in Hertfordshire, where wheat was sown every year *for forty years in succession*, 1844–1883, on the very same plot of mediocre soil, and an average crop of 14 bushels to the acre was obtained, although that soil received no sort of manure since the year 1839.* And in France, Professor Grandeau had no difficulty in raising the average crop of eighty-five acres of land from 25 to 38 bushels, without spending one penny more for manure—simply by improving the methods of cultivation. †

As to *manuring*, the idea ripens among practical agriculturists that the chief thing with manure is not so much to plough in large quantities of costly manure in the autumn as to watch the wheat plant in growing, and to supply it with fertilisers (chiefly nitrogen) at those periods of its growth when it most wants them. In the spring, wheat is wanting nitrogen, and if a small quantity of it (say 80lbs. per acre) in an assimilable form be supplied at that time, the results are excellent. Man's work and man's attention to the plant are thus of higher value than expensive manuring without the two.‡

At the same time, a *careful choice of seeds* becomes of habitual occurrence. Not only many farmers pass their seed through a sieve in order to eliminate the smaller grains, but it becomes customary on some farms in France to proceed as follows:—The farmer goes about his wheat field a few days before the crop begins, and picks out the soundest and most vigorous plants which carry two and three stems of equal size, and bear the biggest and the best developed ears. He takes these ears to grow from them his seed. Others do better, and crop off with scissors the top and bottom parts of each ear, keeping the middle part only which contains the biggest grains. With 5 or 6 pounds of such picked seeds, properly cultivated, they obtain next year remarkably good seeds, the yield of which (when they are sown in the fields) is very much in excess above the ordinary crops.§ From several experiments with three best sorts of wheat (one of which was Red Scotch), it results that by using for seed the big grains only of the middle parts of the ears the crop was increased by 22, 26, and 28½ per cent in weight, which shows that the additional labour pays admirably well. At the experimental station of Capelle, in France, the seeds obtained in this way were sown in 1892 on a quarter of an acre in rows 8in. apart, each seed separately 8in. apart (a very handy instrument being used to make it automatically). Each row contained alternately big seeds or smaller seeds only. The results were as follow:—

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* "The Rothamsted Experiments on the Growth of Wheat, Barley, and the Mixed Herbage of Grass Land," by William Fream. London, 1888 (*The Field* Office). Similar experiments have been made, with the same results, at Woburn.

† L. Grandeau, "Etudes agronomiques," 1885–86, p. 151.

‡ Garola, "Les Céréales," p. 118.

§ See Garola's "Les Céréales."

Seeds obtained from:	Big grains from the middle of the ears.		Smaller grains from top and bottom of the ears.	
	Crop to the acre		Crop to the acre	
	of grain.	of straw.	of grain.	of straw.
Early Ears	83·8 bush.	83 cwt.	70·2 bush.	59 cwt.
Later ,, ...	90·4 ,,	77 ,,	62·0 ,,	49 ,,

For many years past the tendency in agriculture was to render it as mechanical as possible—"Go on with the least intervention of man," was the watchword. We saw that in the prairies of America this system has been brought to its highest perfection, and there and then it answered its purpose. But in our thickly-populated countries the reverse takes place. The watchword of our own time is, "Let man give his full attention to the soil, and to the plant while it grows. Do not spare man's intelligence and labour. When both are combined they fully repay, and *more than repay.*" In fact, the advantages of growing the same crop on an area three times smaller are self-evident. It requires less labour to properly plough one-third of an acre than to badly plough one acre; it requires less seed; and one-third of an acre, properly cultivated and properly manured, gives more than the acre which was cultivated in a haphazard way and insufficiently manured. This is why "intensive" agriculture represents an economy of labour and expenditure.

STILL HEAVIER WHEAT CROPS.

Before sowing his wheat a careful farmer usually tests his seeds. He sows a number of grains (say a few hundreds) and counts how many of them have germinated. He finds, with good seeds, that ninety-four out of a hundred have germinated, and only 6 per cent of the grains have yielded no plants. He takes the same seed and sows it broadcast, and he finds that after having sown an average of 400 grains to the square mètre (the square mètre is a little over the square yard), no more than 145 to 180 wheat plants have made their appearance. Fifty-five to sixty-four grains in each hundred have been lost; birds have eaten them, or the young seedlings have been suffocated by those plants which grew more rapidly.

However, as the 145 to 180 plants grow, it is found that each of them gives from two to four stems, one ear on each stem, so that finally we have about 400 ears to the square mètre. The farmer who says that wheat gives "one ear to each sown grain" is thus right, he only overlooks the fact that one-half to two-thirds of the grains which he has sown were lost.

To avoid that loss of seed, and to obtain heavier crops, the Chinese, from time immemorial, have sown wheat in rows, and this is now the practice on all properly managed farms in Western Europe. But every grain of wheat can give much more than two or three stems and two or three ears, as every one can ascertain himself if he puts a few wheat seeds in his orchard (it must be an open space), at a depth of about 1½in., and 8in. to 10in. apart. In the photographs which are reproduced here, and which I owe to the kindness of Professor Grandeau and Major Hallett, one sees that each grain produces a stubble of from fifteen to twenty-five stems, each grain giving from fifteen to twenty-five ears (Fig. 4, which I owe to Professor Grandeau).

This property of cereals, known as *tallage*, or *stoling*, was the point of departure of most remarkable experiments by Major Hallett, of Manor House, near Brighton—his first results having been rendered public at the first International Exhibition, at London, in 1851.* He picked out in his wheatfields the best plants, and took from them the best seeds, which he planted one foot apart, and, proceeding in exactly the same way as breeders of new races of cattle or dogs do, he obtained in a few years his varieties of prolific wheat and barley, which give as much as from twenty to thirty ears from each grain, while the number of grains in the ears was risen from 60 to 128. In one case Major Hallett has even obtained from *one grain* a stubble of barley which gave as many as 110 stems, and nearly quite as many ears. In short, he has obtained from one grain as much as 5,000 to 6,000 grains, and occasionally (for barley) even as much as 10,000 grains (Fig. 5, which I owe to Major Hallett).

Hallett's "Pedigree Wheat and Barley" is by this time widely known in Europe; his varieties have been much experimented upon at the agronomic sections, and in every serious text-book on wheat-growing, which is written in French and in German, the qualities of Hallett's varieties of wheat and barley are discussed at

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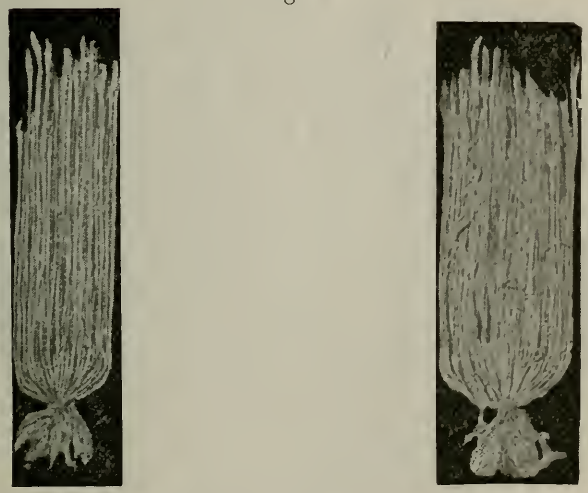
* Fred. F. Hallett, "Pedigree in Cereals," a Lecture. London and Brighton, 1868. Also an Article in the *Nineteenth Century*.

WHAT MAN CAN OBTAIN FROM THE LAND.

Fig. 4.

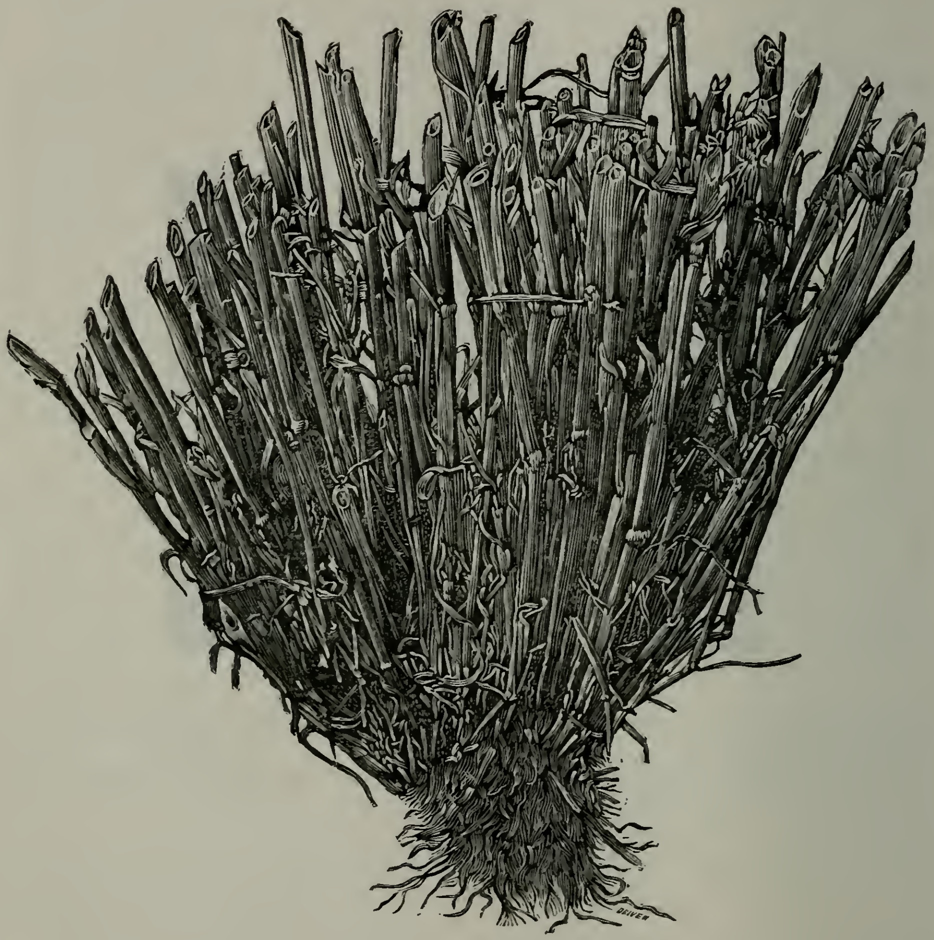


a Wheat Plants. *b*

a has given 17 ears from each planted grain. (Soil manured with chemical manure only.)

b has given 25 ears from each planted grain. (Same soil manured with both stable and chemical manure.)

Fig. 5.



Plant of barley, with 110 stems, obtained by Major Hallett from one single planted grain.

length.* But unhappily, so far as I can judge from the mass of letters which I have received since I first mentioned these experiments (in the *Nineteenth Century*, April, 1888), they seem to be insufficiently known in this country, especially by writers about economics and agriculture for the general reader.

Major Hallett's experiments have thus two aspects, both equally important. He has proved that prolific wheat varieties can and must be bred; and he has shown that by sowing the seeds widely apart it is possible to obtain such crops as could never have been dreamt of before. The breeding of new prolific varieties of wheat has lately been taken in hand by such a master in that direction as M. Vilmorin, and many others,† and we may be sure that in a short time equal successes will be realised for wheat as are already realised for beetroot and potatoes.

As to sowing each seed apart, at a distance of eight inches from each other, I have already mentioned the remarkable results obtained at Capelle (p. 370). We saw that 84 to 90 bushels per acre were obtained in this case, and, the seeds having been sown eight inches apart, every one can ascertain that this crop meant *600 grains from each grain sown.*‡ Professor Grandeau has repeated these experiments at the East France Experimental Station, and he writes §:—"In a proper soil one single grain of wheat can give as much as fifty stems (and ears) and even more, and thus cover . . . a circle thirteen inches in diameter, and even more." Moreover, he adds, if we choose a good variety of wheat, we have eighty grains on the average in each ear, and thus *easily* obtain 4,000 grains from each grain. Repeating the same experiments at the Tomblaine Station in 1886, Professor Grandeau planted early in October a surface of 2,800 square feet with wheat grains, each grain separately, one grain in each hole, 1·6in. deep, 10in. apart. A special tool, called in France *rayonneur*, and similar in aspect to the tool used for planting potatoes, was used for this purpose; three and a half ounces of wheat were thus planted. A number of grains were lost, but soon the whole had the aspect of a very good wheat field, as each grain had given from thirty to forty stems. Knowing, however, how agriculturists are prone to doubt about what they have not seen, Grandeau gives the photograph which I here reproduce with his kind permission (Fig. 6).

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* Professor Garola, who has experimented upon them, remarks that for the cool climate of the Beauce they are too late. Long-continued *tallage* renders them late in ripening. This does not speak, of course, against prolific varieties altogether, but only shows that the same breeding ought to be experimented upon the earliest (Norwegian) varieties of wheat. Altogether, it must be remarked that while Major Hallett has directed his attention to an increase of the number of grains, other breeders ought to do the same with regard to the different qualities of the grains. We must do with wheat what industry has done for increasing the quantity of sugar in the beet crops, and of starch in the potato crops.

† Messrs. Carter and Patrick Shiref experiment now especially upon new cross-breeds.

‡ The bushel contains an average of from 690,000 to 700,000 wheat grains.

§ L. Grandeau, "Etudes agronomiques," 3rd série, 1887–1888. Paris, 1888, p. 43, and following.

These results mean that by sowing the seeds separately the crop which is now asked from three acres of land, each of which requires ploughing, harrowing, manuring, and cropping, as well as some expenditure in fencing, can be obtained *with less work and less expenditure* from *one acre.* In the Capelle experiments one man's bread food (8½ bushels) has *actually* been grown (with an economy of labour and money expenditure), upon the eleventh part of an acre, *i.e.*, upon 4,114 square feet, or *64 feet square;* while Professor Grandeau has grown the same amount on an area of 2,250 square feet, that is, *47 feet square*, or nearly one-twentieth part of an acre.

However, it appears very probable that a further improvement may be required, not so much for further reducing the area—it is small enough—as for rendering the crop more perfect, and especially more secure. It is well known that in China *3,840 inhabitants to the square mile* find their living from the soil. This almost incredible result is obtained in two ways—by utilising what we lose in sewage, and by *replanting.* The Chinese and the Japanese do with their rice plants as our gardeners do with lettuce and cabbage. They sow the seeds in a chosen bit of soil, well prepared, properly irrigated, and protected by strings from the birds, and when the young plant has attained a certain development they plant it in the field. Rice crops immensely in excess of what they are in Europe and the States are thus obtained.*

It was only natural that several French writers (Toubeau, Eugène Simon) should come to the idea that wheat could be treated in the same way, and that a considerable economy of soil, labour, and expenditure could thus be realised. However, no experiments have yet been made in this direction; but Professor Grandeau, who had already ample opportunities to realise from his experiments the advantages of sowing grain by grain wide apart, and whose opinion I have asked on this subject, replies to me that he believes that this system has a good future

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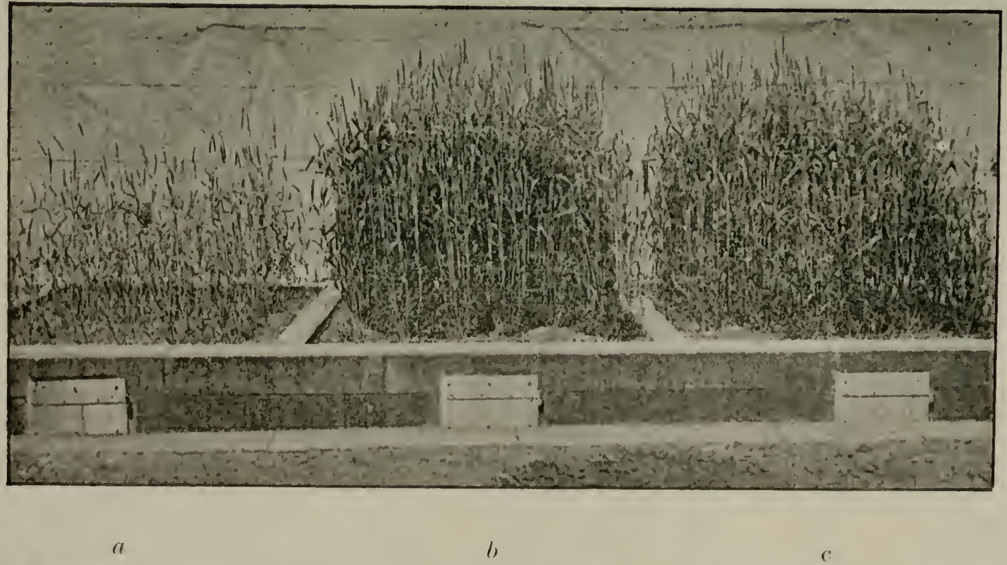
* See M. Fesca's "Beiträge zur Kerntniss der Japanesischen Landwirthschaft." Berlin, 1890.

Fig. 6.



Squares at Professor Grandeau's experimental station, planted with grains of wheat, in three different soils (*a*—pure sand, *b* and *c*—manured arable soil), each grain 12 inches apart.

before it. If it were easy to have in this country even as much as half-an-acre of open field for such experiments I certainly would have made them long since. But—find that acre![*]

Let us leave, however, what has not yet been experimented upon, and sum up only what has been *proved* by experiment. Taking always that one man's bread food is represented by 8½ bushels, we see that the following areas are required to grow that amount of wheat under different modes of culture:—

Mode of Culture.	Average crop per acre.	Area required to grow one man's Bread Food.
	Bushels.	Square yards.
Far West of America	8½	4,840
All France..	17	2,420
Great Britain average	28	1,433
Belgium average	30	1,338
Allotments in England	40	1,004
High Farming in N. France, highest crop.	60	669
Experimental Stations, highest crops ...	80	502
Seeds planted 10in. to 12in. apart.........	128	312

The margin of improvement is thus very wide, as the area varies from a half to one-twentieth part of an acre.

SOME OTHER FIELD CROPS.

Potatoes.—The average potato crop in Great Britain is less than 6 tons per acre (5½ to 5$\frac{8}{10}$). In France it varies from 3 to 6 tons. Let us then see what it could be.

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[*] "One man's bread food," *i.e.*, 8½ bushels of wheat, means about 5,500,000 grains of wheat. Without going as high as 4,000 grains per wheat plant—which is not at all impossible—let us take only 1,000 grains per plant. That means 5,500 plants. Sown separately, or replanted 12in. apart in the row, and taking 11in. between the rows, that means 5,050 square feet, or 71ft. square, which in all probability could be reduced to 50ft. or 60ft. square. As to the additional work of replanting, the Jersey gardeners reckon that one man plants from 600 to 1,200 plants in one hour. That would mean from nine to four-and-a-half hours of additional work; to say nothing of the machine tools which could easily be invented, if need be felt, and which would largely economise the work. But it must also and always be remembered that each reduction of the area under culture represents a considerable saving in ploughing, manuring, fencing, and the like.

WHAT MAN CAN OBTAIN FROM THE LAND.

Professor Aimé Girard has devoted for the last few years his energies to increase the potato crop in France.[*] He made a wide series of experiments in order to ascertain what are the best methods of potato growing, and he entered in correspondence with a great number of growers to induce them to follow his instructions. Three hundred and forty persons answered the call, and out of them, 110 persons cultivated, exactly in conformity with Girard's instructions, areas exceeding a quarter of an acre each, while more than twenty reported about crops grown upon three to thirty acres. The results were exceedingly good:—

59 growers obtained	...............12 to 14 tons per acre.
21 ,, ,,	...............14 to 16 ,, ,,
16 ,, ,,	...............16 to 18 ,, ,,
14 ,, ,,	...............18 to 20 ,, ,,
110 growers, average	...............14½ tons per acre.

Besides, 230 growers experimented on a smaller scale, and obtained results corresponding to 20–36 tons per acre.

Or else, in countries where potatoes are grown for distilleries, great importance is given to heavy crops and to the increase of the quantity of starch in the crop. Field experiments are consequently made on a large scale with various sorts of potatoes, and the result (in Germany) was lately that the lower sorts gave about 9 tons per acre, while the better sorts yielded from 14 to 32·4 tons.

As to the largest crop on record, it was obtained some forty years ago in this country by the well-known veteran horticulturist, Mr. Knight. It was 34 tons and 9cwt. per acre, equal to 1,284 bushels of 60lbs. each. It is superior to the crop which lately obtained the highest award at an agricultural competition in Minnesota, and was of 1,120 bushels (30 tons) to the acre.

We thus see that the field for improvement, from 6 to 14 tons, or even perhaps as much as 30 tons, is immense.

A few words must, however, be said as regards the *early potatoes*, of which the small island of Jersey sends every year to this country no less than 60,000 tons, more than £500,000 worth, in May and June, while the same amount could easily be grown in this country. Of course, we are always told that the sunshine in Jersey and the absence of spring frosts permit the Jersey farmers to send their potatoes to England a fortnight or so before the English potatoes are ready. However, everyone who knows

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[*] "Annales Agronomiques" for 1892 and 1893.

South Devon, as well as parts of the South Coast, will agree that there are plenty of places in Southern England where early potatoes could be grown equally well.*

What has made the whole of the wonderfully managed agriculture of Jersey—where we find the greatest amount of all sorts of agricultural produce obtained from the smallest area, the greatest number of the best cows kept on the smallest area, and a variety of culture brought to perfection—is its system of *land tenure* first of all and above all.† As to the early potatoes, the farmers choose for them the best situated slopes with a southern aspect—every patch of land suited for that culture, be it only 100 square yards in all, being utilised for that purpose. The land is heavily manured—the imports of all sorts of guano to the island being formidable; and then there is quite a system of potato growing—the experience of all the farmers of the island taken together, and improved upon by every one of them, for the common benefit. After the potato crop is out, a special variety of "three months' wheat" is sown at once and cropped that same autumn; or some green crop, chiefly mangold, is sown. Not a day is lost for it, each strip of the small field being sown with wheat as soon as that strip has been cleared of potatoes.

Grass and Hay.—In another branch of open field culture, namely, in the production of grass and hay, we see the same progress realised of late.

The Rothamsted experiments have shown that while an unmanured meadow gives, on the average, 1½ ton of hay per acre, 2 tons on better meadows, and 2½ tons on the best ones—which means that from 3 to 2 acres are required for keeping one cow—farmyard manure increases the produce by 1 ton on the average, and farmyard manure, combined with chemical manure, increases the hay crop by 2 tons to the acre.‡

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* It may be useful to point out that the peasants of the canton of Vaud, in Switzerland, along the coast on which Montreux, Vevey, and Clarens are situated, protect their vineyards from spring frosts by artificial clouds of smoke. In the spring every peasant has a heap of dung ready to be lighted, and as soon as the thermometer approaches the freezing point in the early hours of the morning the village watchman wakes up the peasants, who light their heaps of dung. In the Scilly Islands the same practice has lately been introduced to protect the potatoes. It is in general use in California and in all those French villages where communal customs continue to exist, or agricultural co-operation has lately been introduced—a very old custom, I must say, as Garcilasso di Vega was struck by it as he reached the coasts of America.

† See D. H. Ansted and R. G. Lathom, "The Channel Islands," 3rd edition, revised by E. Toulmin Nicholle. London, 1893 (Allen).—W. E. Bear, "Glimpses of Farming in the Channel Islands," in the *Journal of the Royal Agricultural Society of England*, 2nd series, vol. 24, 1888, p. 365.

‡ W. Fream, "The Rothamsted Experiments." London, 1888.

But man has another powerful means at his disposal for increasing the yield of his meadows, namely, irrigation. The *marcites*, or irrigated meadows near Milan, give 20 tons of green fodder (5 tons of hay) in the lower parts of the irrigated area, and no less than 8 to 10 tons of dry hay in the upper parts.* On the plain of Gennevillers, near Paris, where nearly 2,500 acres are irrigated by sewer water, the average crops in field culture are now 8 tons of hay, 11 to 18 tons of potatoes, 75 to 108 tons of beetroot, and so on, per acre; while in smaller farms the crops per acre are something like the following:—36 tons of cabbage, 20 tons of turnips, 58 bushels of beans, and so on—the gross revenue from the acre being reckoned by French agricultural writers at £150 and more.

Irrigation has proved so advantageous, as a rule, that within twenty years (1862–1882) the surface of regularly irrigated meadows was increased in France by full 1,340,000 acres, and now that agricultural co-operation among the peasants has taken a sudden extension, since it has ceased to be unlawful, irrigation spreads with a remarkable rapidity. The costs of irrigation are fully repaid within a very few years.†

Indian Corn.—It would carry me too far to discuss recent improvements in various green crops, and I shall give only one example more to show what man's intelligence can obtain. It relates to Indian corn. A farmer in the United States, Henry Stewart, has made the following experiments.‡ In 1876 he began to practise continuous manuring and frequent cultivation of the soil. His reasoning was that corn grows rapidly, that it needs a quick start, and that there are periods when it wants more food: first, when the plants are about 3ft. tall; next, when the tassel is first appearing, which corresponds to the period of puberty in the plant; thirdly, when the silk appears and the fertilisation of the flowers is at hand—a most exhausting period in the life of the plant; and fourthly, when the grain is filling. Consequently he put in 500lbs. to 600lbs. of complete manure before planting, and he applied 50lbs. of easily soluble manure at each of the four periods mentioned. The seed (a variety of the many-eared corn well known in the South) was planted by a special little machine, and—weeds or no weeds—he cultivated the soil every week by means of a V-shaped sloping-toothed harrow, moved by a horse. The first year's result was 398 bushels on four acres, and since that time he has obtained regularly 80 bushels, or more, of shelled corn per acre, while the usual average is from 17 to 33 bushels.

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* Barral's "Dictionnaire d'Agriculture," article "Irrigation;" Ronna's "Les Irrigations," an excellent work, making part of the above-mentioned "Bibliothèque Agricole;" Boitel, "Herbages et prairies naturelles," Paris, 1887.

† See Barral's "Journal de l'Agriculture," 2 Février, 1889, p. 170.

‡ *The American Agriculturist*, August, 1892.

In short, in every direction there is full room for man's inventiveness and intelligence, as well as for his labour, for improving the produce obtained from the soil and largely increasing its quantity. For centuries past agriculture was stationary. It was the occupation of the slave, of the serf. And only now—since men, free, with open minds and with some education, have taken to it—it begins to make a new start. Who is the man presumptuous enough to say: "It will go so far, and not further?" Who *can* see its natural limits now that it has just began to widen them?

MARKET GARDENING.

In all the above I have considered what man can obtain from the land in field culture by slightly improving the soil and without yet giving special care to each plant separately. A quite different mode of culture has, however, developed gradually—chiefly in the neighbourhoods of the great cities—and it has lately taken a formidable extension, of which we cannot yet see anything like the limits.*

In market gardening, man takes a very limited area of land; he puts in it a considerable amount of labour, and he obtains from very small plots of land such an amount of produce as seems hardly comprehensible to the routine agriculturist. Of course, while the market gardener grows incredible quantities of food on extremely limited areas, he also aims at obtaining the highest price for his produce, and consequently he endeavours to crop whatever he grows—plain vegetables or fruit—before the main crop is ready in the open field. He resorts, therefore, to artificial heat, and gradually market gardening develops into *culture in glass houses*, heated or cool. It is even impossible to draw a line between market gardening and culture in glass houses, because every market gardener uses some frames or hot beds to obtain artificial heat. But, for the convenience of the reader, I shall treat the two separately, taking under the heading of market gardening all horticulture with the *aid* of glass, and giving a separate chapter to culture *exclusively in glass houses*, which again has lately taken a formidable extension.

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* Of works on this subject I can warmly recommend, first of all, Gressent's "Le potager moderne" (Paris, Aug. Coin publisher), 7th edition in 1885, and the same author's "L'arboriculture fruitière," 8th edition in 1885; also, Vilmorin's "Les légumes usuels," Paris, 1890, 2 vols.; J. Ponce, "La culture maraîchère aux environs du Paris," Paris, 1869 (Librairie Agricole); Courtois Gérard, "Manuel pratique de la culture maraîchère," 3rd edition, Paris, 1858; Pynaert, "Les Serres Vergers," Gand, 1882. Of manuals for market gardening and horticulture in English there is a profusion, as well as there are excellent horticultural reviews to suit all purses and tastes.

Let us say at once that the market gardener will not set to work unless he has made up his mind to obtain £50, £100, or even £150 worth of produce per acre either from the sale of vegetables out of season (in French they call them *primeurs*), or, which is more frequent, from the *quantities* of vegetables which he will crop in season. It must also be remarked that in horticulture, as in all other branches of culture, the land rent grows so rapidly, and attains such proportions, that one hardly understands how these sturdy pioneers of future agriculture could at all realise the immense progresses they have realised. Suffice it to say that market gardeners in the suburbs of London pay regularly £10 to £15 per acre of land rent, to say nothing of the taxes,* and that in the suburbs of Paris market gardeners pay from £8 to £18 and £27 rent per acre.†

These figures alone show what amounts of produce the French market gardeners must obtain. But it must not be thought that this sort of culture can be found on but a few acres in Europe. In this country, in 1894, there were no less than 88,210 acres under this sort of culture, exclusive of vegetable crops grown on farms; while in France there are 1,720,000 acres under market gardening (*culture maraîchère*), and it continually takes a further extension. In the United States the *truck-farms* alone (those farms which send their produce by steamer and rail to other States) cover 160,100 acres,‡ and so on. It must, therefore, be understood that I do not speak of something exceptional, but of a culture which already covers hundreds of thousands of acres.

Now, the market gardener, first of all, *makes his soil.* Give him an acre of American prairies, or the asphalt pavement of a London street, he will make his soil in both cases; he may prefer even the pavement, which would represent a drained subsoil. Everything will be utilised to make the soil; turf, loam, road scrapings (in a small proportion), soil made with the "cyclone pulveriser" out of rocks, pulverised granite and pulverised schists (largely fabricated in France), river sand, and especially fully rotten manure, will be used to make the soil, according to the requirements of each sort of plants. The Paris market gardener, who uses coal and coke to a limited extent, and obtains the necessary heating of the soil from the fermentation of different sorts of stable manure, produces such quantities of new soil that he is compelled to sell every year over half-an-inch of soil—otherwise it would grow in height from year to year. Nay, those who will like to consult the article on *culture maraîchère* in the just issued classical French Dictionary of Agriculture, by Professor Barral, will find it stated by the writer of this article (Professor J. Dybowski) that of late years the Paris market gardeners include in their renting agreements a clause permitting them *to carry away a certain layer of soil* when they remove to another place. It is found advantageous *to cart away the soil, together with the frames and the glass bells.*

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* John Wright in "Journal of Horticulture," May 30, 1887, p. 437.

† Courtois Gérard.

‡ Their exports of green vegetables and preserves of vegetables were as follow:—In 1888, 24,315 tons of vegetables and 9,542 tons of preserved vegetables. Three years later (1891) the respective exports were 37,659 tons and 12,757 tons. (Baltet, "L'horticulture dans les cinq parties du monde." Paris, 1895).

The market gardener does not rely either upon rain to supply his plants with moisture. He has a well, a pump worked by horses, or by a steam or gas engine, as well as a net of water pipes. And every plant that can be replanted is replanted not once but twice, as a rule—the seedlings being planted first in a *pépinière*, *i.e.*, in a small piece of ground provided with the best soft soil, where they can be sheltered in case of need, and where they can develop a thick network of rootlets to feed upon, and from the *pépinière* they are planted in the beds—mostly amidst other plants which will be pulled out by the time the young seedlings will require full space. In this way the gardener obtains, *as a rule*, five to six crops from each square yard, while under Paris the art is brought so far as to obtain seven to eight crops of various produce—cheaper vegetables and those which pay best—from the same plot.*

And, finally, artificial heat, formerly obtained by means of hot beds, and now by hot water pipes, is largely resorted to.

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* To give an idea of that sort of culture, I take one example, and not the most striking, out of the many given by Courtois Gérard, in his already mentioned work. It relates to culture in frames, without hot water pipes. Carrots are sown on December 15th; they will be ready by April 1st. However, in the second half of December, brown lettuce is planted between the rows of carrots, and it will be ready before the carrots—that is, at the end of February. Immediately after the lettuce, and before the carrots have been taken out, the young seedlings of melons are planted in the first half of March; they will be ready in the first half of June. Then, cauliflower is planted in the second half of June, to be ready by the end of August; but chicory is planted between the cauliflowers in the first days of July, and it gives a crop which is ready by the end of September, one month after the cauliflowers. Before it has been taken out, that is, in the first days of September, *mâche*, which is used in France for salad, will be sown, to be ready in February. This was the practice with frames placed on hot beds. Now that artificial heating is made in the frames, the late autumn and winter months are utilised for much better-paying crops than *mâche*. The seedlings are evidently grown separately, in boxes or frames first, and next in the *pépinière*, before they are planted finally in the frames.

It is evident that such an intensive culture cannot be carried on on a large area. Consequently, those French market gardeners who resort but little to glass have gardens which, on the average, cover from 2 to 2½ acres; while those who carry on still more intensive culture and produce large amounts of early vegetables under glass seldom hold more than 1¼ to 1½ acres. It is estimated in the best French works on the subject that in the first case the brutto money returns reach as much as £240 per acre, while in the second case they attain the almost fabulous sum of £480 per acre. These are the figures given in the work of Baltet, a practical gardener from Troyes, now professor of market gardening, who was sent out to study the subject all over the world, and has lately brought out a most interesting work on this subject.*

To give an idea of the extension of market gardening of this description, let me give a few examples.

Belgium has a very great number of horticultural schools, and its horticultural societies do a lot of good work to spread proper information. For the last twenty years the export of vegetables and fruit to this country has increased more than tenfold. The sands and the boggy lands of the unproductive Ardennes are now turned into market gardens. The plain of Haeren, irrigated by the sewer water from Bruxelles, has been turned to the same account; while the Polders are under extensive field culture. The Flanders are described as the market garden of England; English tastes are studied, seeds of vegetables required in England are distributed among the growers, and quite recently the *Cercle d'arboriculture* at Ghent has distributed, free, among the farmers seeds of the vegetables which have the best sale in the English markets.† One single village, St. Trond, sends out every year 5,500 tons of potatoes and £4,000 worth of pears to the North of England and Scotland—a special line of steamers being kept for that purpose. Strawberries from Flanders are sent by the ton to Northern France, to the Rhine Provinces, and occasionally to Covent Garden.‡ Early carrots, cultivated by the ton, and sold at £64 the ton; onions, for which land is rented at £24 to £27 the acre; asparagus, and fruit are whirled by the ton to this country; while in the village of Hoeilart, which stands on the top of a hill, 200 acres are covered with glass to grow grapes, and whole orchards are under glass.

In France, we find four national and thirty-nine provincial schools of agriculture, sixteen farm schools, chiefly given to gardening, seventy-five experimental stations, and 200 professors and teachers of agriculture, market gardening, and horticulture; while horticulture proper has one national school and a very great number of smaller schools. In the suburbs of all big French towns thousands of acres are under the *culture maraîchère,* different regions having their own historically developed specialities. Round Perpignan, for instance, the market gardens cover more than 2,500 acres. Artichokes are sold from October till June, and it is reckoned that the *net* produce attains £32 per acre in field culture. The asparagus plantations of Central France are immense, and in improved field culture the acre under asparagus, when it has attained full growth, yields from £48 to £80 worth of produce. In the Loiret, 1,500 gardeners, employing 5,000 more men and women, purchase every year £60,000 worth of manure, and sell from £400,000 to £480,000 worth of vegetables.

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* Ch. Baltet, "L'Horticulture dans les cinq parties du monde," Paris, 1895.

† "Illustration Horticole," May 15th, 1894, p. 135.

‡ I take this last statement from the above-named work of Baltet.

About Roscoff, an area 25 miles in diameter is entirely given to vegetables, and every year 6,000 tons of early potatoes and great quantities of onions are exported to England. In the neighbourhood of Cherbourg, on a land lately conquered from the sea, we find 1,300 acres of potatoes (exported chiefly to London), 500 acres of cauliflowers, 125 acres of Brussels sprout, and so on, while acres begin now to be covered with glass, for obtaining potatoes in the middle of April, in order to export them to England. In the small commune of Surtainville, near Cherbourg, nearly 300 acres give regularly three crops every year: cabbages in February (planted in August), early potatoes next, and haricots, turnips, and the like by the end of the summer—to say nothing of the catch crops, the value of which depends entirely upon the ability of each gardener. As to the neighbourhood of Paris, we find there about 25,000 acres under forced culture, and twice as much (chiefly in Seine and Marne) under ordinary market gardens, and an immense mass of the vegetables they grow is exported to England.

In fruit culture, progress is still more striking. At Montreuil there are no less than 750 acres thickly covered with 400 miles of walls, upon which peaches grow in the open air. Taking Bagnolet, Fontenay, and the other small villages, there are nearly 1,250 acres covered with walls upon which the peach trees grow, and from this space about 25,000,000 peaches are sold every year in Paris during a period which lasts from ten to twelve weeks. This is how the Paris gardeners make the climate which they have not.*

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* The tiny village of Bennecour, in Seine et Oise, not far from Paris, has only 850 inhabitants. Until lately it had long stony slopes, whose only use was to supply stone for the streets of Paris. Now these slopes have been converted into orchards for apricot and cherry trees, blackcurrant bushes, and plantations of peas and asparagus, and in 1881 the tiny village sold £5,600 worth of apricots alone, at the low price of 6d. per lb.

WHAT MAN CAN OBTAIN FROM THE LAND.

Transportable glass frames, which are put against the walls, and small glass rooflets adjusted to the top of the walls, also begin to come in use, and most probably they will soon "take off another degree of latitude" in the Paris orchards.

In short, in order to supply this country with vegetables, land is conquered from the sea on the Continent; soil is *made* by pulverisers and is fabricated with stable manure and different sorts of guano shipped to a great extent from England; hundreds and hundreds of acres are covered with glass in Belgium, France, Guernsey, and Jersey, and thousands of tons of coal are burned to heat them—while, at the same time, three million acres go entirely out of culture in Great Britain—and the economists of this country continue to assure the population of this country that they are over-populated, that their soil is unfertile, that their climate is inclement, and what not—and that consequently other nations must take care of feeding the inhabitants of these Isles, and that the English nation must support the "poor" landowners and the farmers whom they have ruined by their greediness!

Let me give now, in conclusion, some well-ascertained figures, showing what man can obtain from the land, under market gardening, with glass used only as an auxiliary in culture. Let us take the detailed figures given by M. Ponce, a practical gardener himself, who cultivated two and seven-tenths acres, with the aid of three men and four women. They obtained on the average :—

Spring and Summer crop (before July):

Lettuce	49,000	heads.	Cabbage	6,000	kilogrammes.
Spinach	360	kilogrammes.*	Onions	3,600	,,
Carrots	7,600	,,	Leek	2,400	,,
Radishes	3,500	,,	Parsley, Sorrel, &c.	2,450	,,
Cauliflowers ..	2,000	,,			

From July to November:

Melons	3,000	plants.	Autumn Cauliflower	3,000	kilogrammes.
Tomatoes	5,000	kilogrammes.	Carrots	2,000	,,
Choice Fruit ..	5,000	dozen.	Leek	2,000	,,
Lettuce	52,000	heads.			

During the Winter:

Root Celery	3,000	kilogrammes.	Various	1,200	kilogrammes.
White Celery ..	12,000	,,			

All taken, this means that 120 tons of various vegetables, valued at about £800, were obtained in one year from an area of two and seven-tenths acres.

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* The kilogramme equals 2⅕ English pounds; 1015 kilogrammes equal one English ton.

CULTURE IN GLASS HOUSES.

We saw what can be obtained by the market gardener with the aid of frames or *bâches* (frames with somewhat higher brick walls). However, a new and much more advantageous means of culture is developing lately, namely, culture in glass houses, heated or cool.

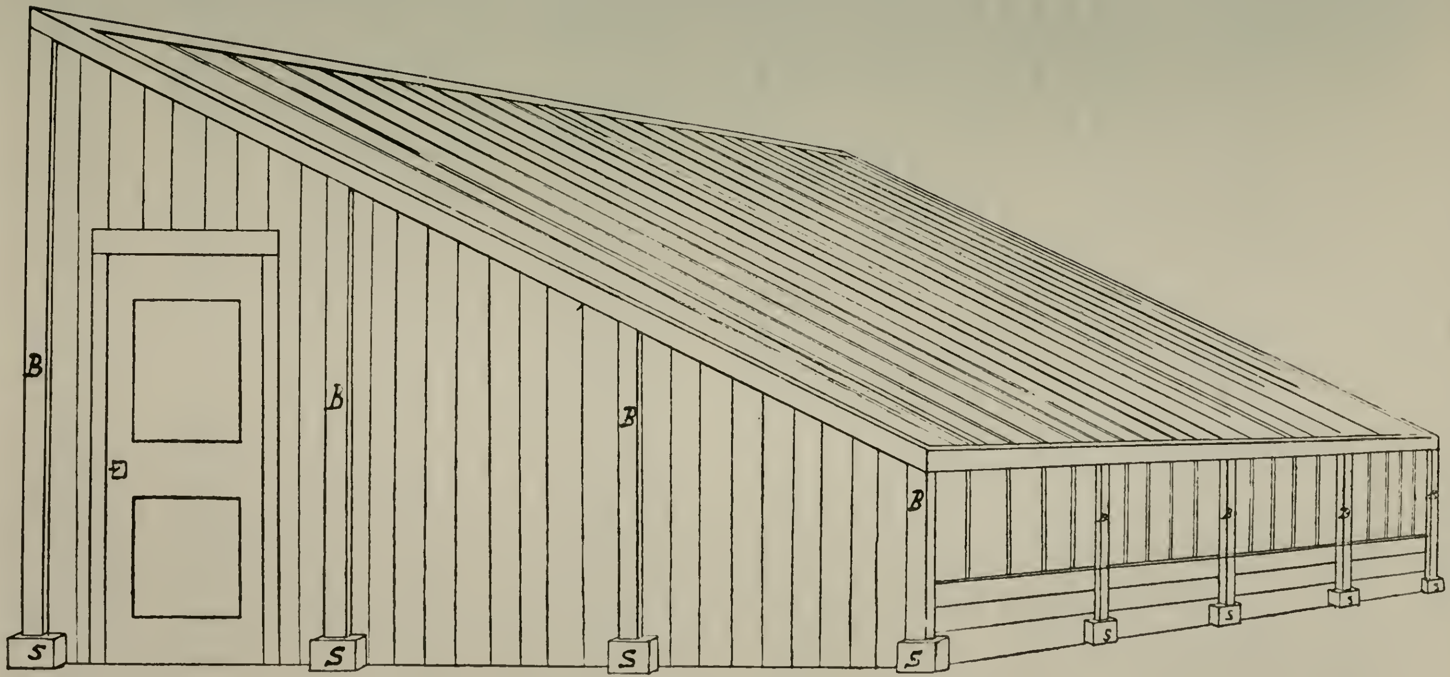
Culture under glass may be described as an English growth. It began in the vineries of the rich, but gradually vineries were built for the sale of grapes in the winter—if I am not wrong, first in Scotland. Large hothouses began also to be built for growing flowers for the market, and next for the culture of tomatoes; cheaper greenhouses began to be fabricated, and by this time the glass house is a quite common feature in the suburbs of all large towns.

While this progress took place, a further step was made, especially at Guernsey, where the greenhouse was immensely simplified. Instead of the costly and lofty structures, with granite or brick walls, glass houses of the simplest construction began to be built in Guernsey by separate gardeners first, and next by different companies. By this time we find greenhouses of all descriptions, beginning with those which cost 13d. and 18d. the square foot of glass, down to those which cost only 6d. the square foot; while cool greenhouses (without artificial heating) are built entirely in wood and glass at a still smaller cost. I even saw this year a row of cool greenhouses of which the front and back walls were in corrugated iron; and although their owner frankly admitted that they were too cold in winter and too hot in summer, he nevertheless had grown in five continuous houses, which covered altogether one-fifth of an acre, no less than one ton of green peas, ready in April, and which he has sold, I hope, at 6d. the pound.

I give on the following page a drawing of the plainest cool greenhouses which I saw in Guernsey (Fig. 7).

Besides, the greenhouse is no more built exclusively for growing grapes out of season. Early potatoes are already an habitual greenhouse crop, and, as a house planted with potatoes cannot be heated (they would only give luxuriant leaves), heating is only kept in reserve to prevent the young plants from freezing at night during a sharp frost. Peas, French beans, radishes, carrots, and even lettuces (as a catch crop between other plants) are grown. More than that, there is under Chicago a big establishment of greenhouses where lettuces are grown with the aid of electric light, which is kept up at night, and the enterprise is described, both in the Press and by a gardener friend of mine who has visited it, as a

Fig. 7.



Cool Greenhouse, of the plainest description, in Guernsey.

S—concrete stones mounted on purpose to receive the standards *B*, *B*; the spaces between them being fitted with matching-boards, which enter a groove in the stone *S*.

decided success.* Another establishment of the same kind was lately started at Boston.

The kitchen garden under glass, with or without artificial heating, is thus the new development in market gardening; and when one thinks of the incredible pains which the French gardener takes to raise early carrots, turnips, lettuce, and the like on hot-beds, one fully understands that an economical greenhouse answers very much better the same purpose.

Several years ago, when I first wrote upon this subject, I ventured to say that grape-growing under glass in England is cheaper than grape-growing in the open air in many parts of Switzerland and on the Rhine. The capital outlay is smaller for a greenhouse than for making the walled terraces on the slopes of the steep hills, where every shovelful of soil is carried on men's shoulders to a height of 50, 100, or 200 feet. The yearly labour is smaller, and the result is better assured; while (I know it by my own experience) even in a greenhouse of the most "jerry-building" style grapes can be had in October in a London suburb at almost no expense whatever, except some attention given to them during spare hours.

The prices at which grapes are now sold, even during the winter, fully confirm the above. Already, in 1889, Mr. D. Thomson wrote in a leader in the *Journal of Horticulture* (January 31st, 1889, p. 81), as follows:—

> To show the great difference in price and method of producing them [grapes], it is within my knowledge that an amateur in Scotland, some five-and-twenty years since, ripened a house of Hamburghs [the usual black grapes, now sold everywhere] and Chasselas Musqué, in February, and sold the whole to a fruiterer for 25s. per lb., and most of them went to the late Emperor of the French at 50s. per lb. Now grapes in February do well if they realise from 2s. 6d. to 5s.

Even so much could not be realised now for common grapes. Greenhouses sprung up by hundreds of acres since, both in this country and Belgium; and while the best bunches of beautiful aspect can fetch very high prices, Belgian grapes are sold at Covent Garden, in *March*, at 4d. and 6d. the pound.† What would they cost, then, if they were grown without heating, to be ripe in October? Evidently less than they cost in October in Switzerland!

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* Electric light was first applied to greenhouses by Siemens. Later on it was said that it was harmful to plants. But still later on it was found out, at the Cornell University, that it admirably favours the development of foliage, and consequently can be used with profit for lettuces, for which there is always a great demand during the winter in the States.

† Here is the market quotation, which I took at random from a London daily:—"Covent Garden, March 19th, 1895. Moderate supplies of fruit and quiet trade. Fair arrivals of vegetables, with a moderate inquiry. Quotations: Belgian grapes, 4d. to 6d.; Jersey ditto, 6d. to 10d.; Muscats, 1s. 6d. to 2s.; and tomatoes, 3d. to 5d. per lb."

As to the extension which this culture has lately taken in England, and especially in Guernsey, it can best be seen from the amount of grapes, tomatoes, French beans, and green peas which are exported from Guernsey. Last June the passenger steamers going off the Southampton line were continually kept at Guernsey for two hours in order to receive cargoes of from 8,000 to 9,000 baskets of fruit every day, and over 12,000 baskets three days a week, each basket containing from 12lbs. to 14lbs. of fruit. The steamer I came home with took 70 tons of fruit, and so it went on—the local papers mentioned it—almost every day. We surely shall not be above truth if we take that during those weeks the Guernsey gardeners and fruit growing companies of recent origin sent to England with both steamer lines from 350 to 400 tons of fruit, chiefly grapes and tomatoes, every week.

One may be inclined to ask what are the returns in money of one acre under glass; but it must be said that it is as difficult to ascertain the money returns of gardeners as it is to know them from manufacturers. As to the returns in quantities, they are, on the contrary, much better known, and, for our purpose, they are of greater moment. Thus, let us take the establishment of Mr. Bashford at the time he had only thirteen acres under glass. The crops at that time, as given by Mr. W. E. Bear, and verified by myself twice, were as follow:—The thirteen acres under glass yielded (two and three crops every year) 25 tons of grapes, 60 to 80 tons of tomatoes, 30 tons of potatoes, 6 tons of green peas, and 2 tons of French beans. That is, 133 tons of *choice* fruit and vegetables, all out of season (grapes since the first day of May). The total returns from this establishment were valued in money (by Mr. Bear) as equivalent to the returns of 1,300 acres under usual farming culture. I may add that one gardener (the owner himself) and thirty-three men cultivated that area, and that considerable quantities of other small things were grown besides between the glass houses; while 1,000 cartloads of coke and coal (chiefly coke) were burned every year.

The crop of 2,000lbs. of green peas from half a *vergée* (9,688 square feet, or one-fifth part of an acre) as a first crop has already been mentioned. It was followed by a crop of tomatoes, which, taking the usual Jersey estimate of from 8lbs. to 10lbs. per plant, ought to give from 10,000lbs. to 15,000lbs. of tomatoes (4 to 6 tons). A very good result, of course, for so modest a greenhouse, without heating.

As to early potatoes under glass, it is estimated that they begin to pay when the crop is over 1,080lbs. per acre in April (£9 valued in money), and it is estimated that 8–10 tons per acre in April would be a good crop. Of course, the potato crop is followed by a second crop.

The meaning of all these facts is self-evident. If we wish to obtain very early crops and very choice fruit and vegetables, we must reckon that the first cost of covering one acre with glass under the present conditions, with all the tribute we pay to the owner of the brickfield, the owner of the brickworks, the owner of the forest from which the timber was taken, the owner of the sawmill, the owners of the iron, glass, and engine works, and so on, reaches about £1,150 for the glass structure, and perhaps as much for the heating and watering apparatus. The house will last, at a very modest estimate, for fifty years. The cost of heating one acre is about 75 tons of coke, and the labour required during the year is the labour of three men working ten hours a day, or 165 hours a week.

CONCLUSION.

The conclusions which may be drawn from the above-mentioned facts are self-evident.

The progress realised by agriculture and horticulture with the aid of technics (fabrication of manure, agricultural machinery, means of transport, cheap greenhouses, cheap motors for watering, and so on) shows that true progress for every nation lies *in a combination of agriculture with industries.* Neither branch can thrive separately.

We see, moreover, that permanent improvements, such as deep ploughing, improvement of the soil, drainage, and irrigation, open such means for doubling and trebling the crops that every nation could easily treble its agricultural and horticultural production if it only utilised those human forces which—to say nothing of inveterate idlers—are lost every year in consequence of permanent and temporary want of employment, or those which are lost because our present system knows no other form of labour but hired labour for nine, ten, or twelve hours a day, all the life long.

If one-tenth part only of these wasted forces were utilised for permanent improvements of the soil, which are so varied that every man and woman, whether strong or weak, whether country-born or weakened by town life, could collaborate in them—if one-tenth part only of these forces were utilised by the commonwealth for the commonwealth, the barren pasture lands of this country, where one cow hardly finds its food on a space of two acres, would soon be transformed into acres yielding 5, 10, and 20 tons per acre of varied food.

The *possibilities* of agriculture are progressing so rapidly within the last twenty years that it is utterly impossible to tell what is the smallest area required to grow one man's food. Writing upon this subject eight years ago, I thought that one-tenth of an acre would be the lowest limit for growing one man's food of wheat. But since that time it *has been grown* on one-twentieth part of an acre, and no one can say what will be the lowest limit in ten years hence. Ten years ago, a crop of 16 tons of potatoes per acre would have been considered as a very good crop. They talk now of growing 30 tons to the acre. Ten years ago the Paris market gardener could be mentioned as an example of modern horticulture. "He works too much," the nowaday horticulturist says; "we grow the same things under glass at much less expense, even if we take that the first cost of our greenhouses must be covered in twenty years." Ten years ago, I did not dare to write about vegetable culture with the aid of electric light: wise people would have laughed at my "Utopias." By this time, however, money is made out of the new method at Chicago; and so it is in every direction.

Leaving aside the future promises and possibilities of agriculture, and remaining in the domain of what has already been tested on a large scale, let us see how much land is required to grow the food for 1,000 inhabitants. Suppose they have 1,000 acres of cultivable land, and let us see what they can do with it.

They sow wheat, and obtain, let us say, 50 bushels to the acre. That means 167 acres; we say, *170 acres.*

They grow other cereals—oats for their horses, barley, and so on. Taking the French proportion, they need for those crops another *170 acres.*

They keep cows, each of which gives four gallons a day, *i.e.*, enough of milk for 32 inhabitants; let us say, 32 cows. Taking the Jersey average, where we find 11,730 cows and less than 11,000 acres under green crops, grasses under rotation and unbroken meadow, we shall say, one cow one acre, *32 acres.*

Let us add as many acres to obtain butter, or 32 acres, and let us say, for milk and butter, *70 acres.*

Meat would be a big item. Reckoning 180lbs. of meat per adult per year, we may take one ox for each six inhabitants, or 166 oxen, which is an immense figure. Taking further two acres of green crops and pasture for each of the oxen and the young bulls—which is very much—let us say *330 acres.*

Vegetables in market gardening are grown to the amount of over 30 tons to the acre, and we are sure not to be short in our calculation if we take 600lbs. of vegetables and common fruit per head of population every year. That would require ten acres; while two acres under glass would give in addition all delicacies required. Let us say *20 acres* for vegetables and fruit.

Let us take, moreover, for lodging the 1,000 inhabitants, 200 houses, with half an acre of land attached to each of them for pleasure and all sorts of hobbies—*100 acres.*

We have accordingly:—

	Good culture Acres.	Very good Acres.
Wheat	170	100
Other Cereals	170	150
Milk and Butter	70	40
Meat	330	250
Vegetables and Fruit	20	10
200 Dwelling-houses	100	100
Total	860	650
Remains available	140	350

The first of the two columns represents how land is already utilised on a grand scale for money-making purposes. The second represents what already is being made, although on a smaller scale.

That the population of this country could easily find well-being on the 33,000,000 acres of cultivable land which it has—23,000,000 acres remaining still for their pleasure grounds, as well as a reserve fund for the future, is thus self-evident. And that the growing of that food would require *less* labour than is required either to grow it in a bad way, or to get it from abroad, and to support all the intermediaries, may also be taken as certain.

One word more to conclude. Good agriculture can be obtained only through *village co-operation.* One man—I speak of the average man—cannot manage an estate of 1,000 acres, and utilise that land, with all its varieties of slopes, aspects, watering, and so on, so as to have from it the largest amount of produce with the least waste of labour. This would require growing a variety of cereals, orchard and market gardening, culture under glass, and so on—too much for one man. One hundred farmers walled within a hundred or so of ten-acre farms could not do that either. But one hundred families, associated so as to consider, let us say, 700, or 800, or 900 acres of that land, as the case may be, as their common holding, and the remainder as their homesteads and part of their separate households, *can* utilise that land for making the best use of it. This is why in the French and German villages, since their inhabitants have been permitted by their rulers to associate, the *tendency* is to associate; *to treat parts of their estates (even though they are private property) as a common estate,* which must be drained, or irrigated, or used as pasture, in common. And this tendency can only grow, because it is imposed by the necessities of proper culture on the one side, and by the ever-growing spirit of common right to the land on the other side.

Local Government and Taxation.

BY GEORGE HOWELL, F.S.S.

NO man would ever venture upon the study of Local Government and Local Taxation as an amusing subject, or for the purposes of relaxation from "severer studies." It is, indeed, one of the most complicated that could well be selected by reason of its vast variety and its manifold ramifications. Its immense importance is the only one attraction it can boast of, and in this respect it is second only, if second at all, to the subject of Imperial Government and Imperial Taxation. The questions involved in its consideration are interwoven with the whole texture of our national life, as well as with that of the particular locality in which we may happen to reside. It is, in fact, fast becoming national in its character, rather than local, and in this respect we may to some extent rejoice. Although we are by no means enamoured of too much centralisation, yet the interests of the whole nation are too closely identified to permit of independent self-governing communities such as existed in our early history, as it did also in the early history of all other nations. The Greeks fell a prey to the surrounding nations by reason of their independent isolation. Other great empires of antiquity suffered similarly, from the same cause. The one great problem to be solved in this connection seems to be how to secure local "self-government" without weakening the efficiency of Imperial Government; or in other words how best to secure efficient Imperial Government upon a basis of local self-government, the one being sustained and to some extent controlled by the other. Representative Institutions furnish one means for attaining this object. But, in the Imperial Parliament, the several local communities are lost, so to speak. In the House of Commons such local communities have no controlling power, and in the other branch of the legislature territorial influence overrides all other considerations. The inevitable result is that the whole tendency of modern legislation has been, and still is, in the direction of centralisation, and local *self*-government is becoming an unmeaning phrase in actual life, though local government is in one sense expanding.

It requires no great stretch of imagination, and very little knowledge either of history or political philosophy, to be able to comprehend the fact that the origin of civil society commenced with the family. It then extended to kinship or kindred, then to clanship or tribes, and lastly to nations and empires. The family was governed by its head. As communities arose, in the form of a "settlement," or village, some rough code of regulations became necessary, together with a controlling power to enforce them. The heads of families, or chiefs of tribes, settled the conditions, and enforced their ruling. As the village expanded into a township or city, the mode of government accommodated itself to the change. The growth and development went on until the families and tribes became a nation, with a permanent government. We gain some idea of the tribal system in the history of the Israelites, and of strong independent communities in the history of Greece. The growth of nations and empires is seen in the histories of Egypt, Babylon, Assyria, Persia, and other great Eastern empires.

But we need not go back to ancient history for examples, inasmuch as the history of Britain furnishes instances of all the essential elements of growth and expansion from the family to tribes, from tribes to independent communities, and from these to a nation and vast empire. Our own country perhaps gives us the most perfect example of gradual growth and development, including all the changes incident to internal and external conquest. The early Britons had become settled in some rude form of government ere the Romans planted their standard on the soil of Albion. After the Romans came tribes of Northmen, which in time became the Heptarchy. The latter gave place to a monarchy. Then came William of Normandy. The old system was changed. The new was feudal and baronial. There was a struggle for ascendancy between Church and State, and sometimes for succession. But the chief object was the consolidation of kingly or monarchical power; local authority had to contend for the right of existence. Nevertheless, even the central government found it necessary to institute local authority for its own purposes, and the local authority thus instituted became in time a power, without which even the throne would have become unsafe.

The space at our disposal is so limited, and the subject to be dealt with is so vast, that only the briefest and scantiest reference can be made to the history of local institutions, and of rating, which, however interesting and important, must be made subordinate to that which is more pressing, namely, the present aspects of local government and the conditions of rating, of taxation, and of administration.

It is generally admitted that the germs of the most perfect system of Local Government are to be found in the earlier settlements of the Germanic nations, gradually developing from the family to the self-governing villages, and then extending to larger districts, or associations of villages, occupied by separate families or clans of kinship, amongst whom there was no common tie of allegiance except for purposes of defence. Such was the condition of the Saxons, Jutes, and Angles, when they first settled in England, before they were consolidated into petty monarchies, as the Heptarchy, which were subsequently united into one kingdom. The earlier guild life of Saxon England was part of that system, the voluntary associations thus formed being self-governing, according to the law as then understood and administered. The earlier guilds were something more than trading associations, for they practically became the recognised local authority in the Township. In their later stages they lost the higher authority, and declined to the position of trading guilds.

In Saxon times the essential elements of local regulation and management are to be found in the divisions of the country into "Tithings" (tenths), the "Hundreds," and the "Shires"—the latter was changed to "Counties" under the Normans, but the name of "Shire" is still retained as a geographical expression, synonymous with County. Briefly, the following were the main divisions prior to the Norman Conquest:—

1. The Village Community—a family, or families, with a guild.
2. The Township—associations of families or villages.
3. The Hundred; but subsequently the Parish—(*a*) Civil; (*b*) Ecclesiastical.
4. The Shire (Saxon); the County (Norman) subsequently.

All these were, in a rude sense, recognised as representative institutions, or as areas.

The Norman Conquest effected many changes, but it did not absolutely destroy the entire system of local government. The feudal Barons usurped the authority, but authority was maintained. Manors extinguished townships, and freeholders became free-tenants; the ancient town mote was transformed into the lord's court-baron, the hundred-court lost its authority, as the court-leet usurped its most important functions. But even the Norman chieftains found it to be advantageous to champion local independence, to at least a limited extent, for their own protection. Local grievances were investigated by the light of local customs, and fiscal liabilities were fixed by local "inquests" or "recognitions" upon sworn evidence. Parliamentary representation, in the first instance, was little more than an expedient for obtaining the consent of local authorities to the grants made, or subsidies exacted, and to the enactments passed by the legislature. When the monarchy had become more secure, and Imperial Government more settled, the local authorities played a still more important part in the struggles for liberty and freedom. The County Members in the legislature could not be bought, when the Ministers of the King could be debauched by a foreign potentate. In the days of the Stuarts the county party—trained in the methods of self-government—held at bay the machinations of a venal court party. It was even so, to some extent at least, in the evil days of Charles II.

It does not appear from history that any local rates were levied prior to the thirteenth century. But there must have been some mode of adjusting the contributions which each locality had to pay for some common advantage; common consent became a custom, and then common law. The earlier rates of which we have any historical evidence were those levied for "improvements," making or maintaining roads, embanking rivers, building bridges, and draining marshes. Many such levies were made between the years 1200 and 1300. In the year 1334 and onwards we find fifteenths and tenths levied as local rates. The Poor's Rate was enacted in the reign of Queen Elizabeth, from which date it has been continuous. Systematic local levies for improvements were in full legal force in the reign of Henry VIII., and even before his reign.

Mr. Judge Chalmers traces the history of local legislation up to the Statute *De Officio Coronatoris*, passed in the year 1275. From that date to the present some thousands of Acts, general, local, and private, have been passed, and two very important measures have been brought in this year (1896) relating to education and rating.* The same author states that there were in 1882 some 650 Acts, or fragments of Acts in force, of general application to local affairs; and some thousands of local and special Acts relating to particular districts, or to special things in one or more districts. Since that date there have been added several very important Statutes, such as the County Councils Act, 1888; the Parish Councils Act, 1893; the Education Act, 1891; and several others. To fully comprehend the law it is necessary not only to know the general law relating to local government, but the local Acts of a particular place, as, for example, Manchester, Birmingham, Leeds, or other municipality. As regards London it is still more difficult and perplexing. There are certain great Acts, or groups of Acts, which constitute the basis, as it were, of our system of local government. The Municipal Corporations Act, passed in 1835, was the first serious attempt to grapple with the problems of local government, since which date there has been continuous, if very slow, and gradual progress. The Poor Law Amendment Act, 1834, dealt with pauperism, and led to the establishment of the Poor Law Board. In 1871 the Local Government Board was constituted, taking over all the powers of the Poor Law Board, being armed with powers still more important and extensive. The titles of the chief Acts will indicate their objects and functions, but they form only a fraction of the legislative enactments relating to local government. They are :—

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* See Note, page 418.

1. The Local Government Act, 1871, and amending Acts.
2. The Municipal Corporations Act, 1882 (Consolidation).
3. The Local Government Act, 1888 (Counties).
4. The Local Government Act, 1894 (Parishes and Districts).
5. The Poor Law Acts, from 43 Elizabeth to date.
6. The Elementary Education Acts, 1870, to date.
7. The Public Health Acts, 1875, to date.
8. The Nuisance Removal Acts, 1854, to date.
9. The Highway Acts, and many other series of Acts.

Local authorities are now so multifarious that the mere enumeration of them from memory would be quite a task. Latterly there has been a tendency gradually, if not very logically, to transform them into a few bodies with wider powers and authority, which gives rise to the hope that some day a really efficient, and possibly an economical system of local government will be built up, which shall bring into something like order the chaos which has so long prevailed. The full list of the different groups of authorities is given in the statistical tables which form part of this article; for the present it will be sufficient to mention the several great divisions for the purposes of local rating and administration. They are as follow :—

1. The Parish—the Civil Parish now in most cases, with Vestries.
2. The Poor Law Union, composed of one or several parishes.
3. Boards of Guardians and Overseers, for rating purposes and administration.
4. Municipal Corporations, Cities and Boroughs, Act of 1882.
5. County Councils, under the Act of 1888.
6. Parish and District Councils, under the Act of 1893–4.
7. Local Boards, under various names.
8. School Boards, under the Elementary Education Acts.

The Local Government Board is the central authority in all cases, not only for the great divisions above given, but for all the other numerous bodies which exercise authority, either for levying rates or for expending the rates levied, and generally for administrative purposes. In some instances there is no power of levying a rate. This is the case with School Boards. They are responsible for the expenditure, but some other body has to levy the rate. In a very few cases such bodies neither receive nor expend moneys, but they still exercise some functions of authority. Precept rates are raised by one class of local authority, and paid by them to another; contributions are made by one authority, to be expended by another; loans are raised by one authority, for the purpose of lending to another. All these matters are adjusted by the Local Government Board, and are presented to Parliament annually in a most elaborate set of Returns in six or seven separate parts, the whole being epitomised in the Report of the Local Government Board, the Supplement, and other bulky annual volumes.

Rating Authorities.—In the Report of Local Taxation, 1843, no less than twenty-four separate rates were levied: (1) Poor's Rate Series, 10; (2) Miscellaneous Taxes, each on an independent basis, 6; (3) County Rate Series, 8. That report proposed the consolidation of twelve of them into one General Rate, and seven others into another General Rate. The policy thus indicated was not wholly carried out, but it has been partially by the General Rate on the basis of the Poor's Rate. (See Tables I., II., and III.) Since that date other rates have been levied, as for example the School Board Rate, and others; while the Church Rate has nearly disappeared. There are now about a score of different rates imposed by various authorities. Many Local Authorities do not "impose" rates, that is levy them; but they expend the rates and issue a "precept" for the amount, as in the case of School Boards and some other authorities. The most ancient Statutory Rates were: (1) The Constables' Rate, (2) the Hundred Rate, (3) the County Rate, (4) the Church Rate, all of common law origin; the first statute bearing thereupon was 13 Edward I., in the year 1285. The other early statutes were passed mainly in the reigns of Henry VIII. and Queen Elizabeth. The Poor Rate dates from the reign of Elizabeth. Since that date an immense body of legislation has been passed relating to local government and rates.

The great rating authority is the Poor Law Guardians, the income and expenditure of whom are given in some detail in Tables I., II., and III. Municipal Corporations come next in importance, as being the most complete and effective of all our local bodies, and, on the whole, the best governed. The next, perhaps, in importance, though as yet scarcely fully organised, are the County Councils; and next, the District and Parish Councils, now only getting into working order. But within the County Areas there are the 692 Local Boards, 42 Joint Boards, 361 Highway Boards for 6,904 highway parishes, 574 Rural Sanitary

Authorities, and 43 Rural Sanitary Authorities for 784 highway parishes, besides the host of other rating authorities given in the summary which follows. Altogether there would appear to be about 76 separate classes of authority which have power either to levy or expend the rates, the vast majority of whom both levy and spend. The fusion of some of these bodies is most desirable; and such fusion is doubtless contemplated by the absorption of some of them in existing Municipal Corporations, in County Councils, or in District and Parish Councils by recent legislation.

Summary of Local Authorities.—The last report of the Local Government Board Annual Report (24th) gives a total of 28,938 Local Authorities. These do not appear to include the 7,260 Parish Councils elected in December, 1894, given in another part of the report; therefore the total would be 36,198. A few Authorities which neither receive nor expend moneys are not included, but these are counterbalanced by a few which may have been transferred to some Municipal Authority. The following list indicates the character of the several Authorities:—

Number.	Names by which various Local Bodies or Authorities are known.
649	Boards of Guardians, and one Poor Law Authority for the Scilly Islands.
14,681	Parishes—Overseers as regards the Poor Rate.
61	County Councils—exclusive of the London County Council.
1	County Council of the Scilly Islands.
4	Joint County Committees.
1	County Asylums Board.
62	Visiting Committees of County and Borough Lunatic Asylums.
302	Municipal Corporations of Cities and Boroughs.
301	Town Councils acting as Urban Authorities.
31	Improvements Commissioners — Districts under Special Acts.
692	Local Boards, with varying powers.
42	Joint Boards, also with varying powers.
574	Rural Sanitary Authorities and one for the Scilly Islands.
56	Port Sanitary Authorities.
1,020	Burial Boards, dealing with the health of towns, &c.
28	Boards of Commissioners for Baths and Washhouses.
3	Conservators of Commons.
2	Trustees of Open Spaces.
29	Commissioners for Free Libraries in Parishes and Districts.
1	Joint Library Committees.
16	Trustees for Bridges and Ferries.
174	Inspectorships for Lighting and Watching Districts.
4	Commissioners for Markets and Fairs.

Number.	Names by which various Local Bodies or Authorities are known.
50	Commissioners of Sewers of Districts, under 23 Henry VIII., c. 8, and Act of 1861.
227	Conservancy, Drainage, and Embankment Boards.
44	Salmon and other Fishery Boards.
6	Sea Fisheries Committees.
2	Churchwardens in two parishes where Church Rates are leviable.
88	Harbour, Pier, and Dock Authorities.
361	Highway Boards, acting for 6,904 highway parishes.
43	Rural Sanitary Authorities, for 784 highway parishes.
6,488	Surveyors of separate highway parishes.
2	Turnpike Trusts, now gradually disappearing.
40	Metropolitan Vestries and Local Boards.
1	Body of Paving Commissioners.
7	Bodies of Trustees for Metropolitan Squares.
1	The City of London Commissioners for Sewers.
1	The City of London Corporation.
1	The London County Council.
1	The Commissioners of Police of the Metropolis.
4	Visiting Committees of Lunatic Asylums—County of London.
1	Lunatic Asylum—City of London.
2,285	School Boards in England and Wales.
1	The London School Board.
10	Boards of Managers of School Districts.
2	Sick Asylums Districts.
1	The Metropolitan Asylum District.
1	Committee of the Aldershot Joint Hospital.
7,260	Parish Councils, under the Act of 1894.

The above are all that are enumerated by name. Even those above-mentioned constitute an aggregate of 34,661 public local authorities, all of whom receive or expend moneys, the majority both. The complaint is that many of these authorities overlap each other as regards rating, expenditure, and general administration. The result is that the system, if system it can be called, is costly and extravagant. This overlapping is not confined to particular areas, or to the forms of local government, for it is found in Municipal Corporations, in connection with County Councils, in Parish and District Councils, and in most of the rural and urban parishes, and notoriously so in the Metropolitan District. The cure seems to lie in the extension of Corporations, under the Municipal Corporations Act, and in the development of the County Council as the central authority.

The following tables represent the chief rating authorities and expenditure :—

LOCAL GOVERNMENT AND TAXATION.

TABLE I.—Local Taxation: Valuation, Receipts from Poor and other Rates.

Dating from the Establishment of Local Government Board.	Valuation—Net Rateable Value.	Receipts from Poor Rates.					Receipts in aid connected with the Poor's Rate.	Total Receipts from the Poor's Rate and Receipts in aid.
		Total received from the Poor's Rate.	Rate in the £ on the Rateable Value.		Rate per head of Population.			
Year.	£	£	s.	d.	s.	d.	£	£
1871..	107,398,242	11,610,920	2	2	10	4	510,520	12,121,440
1872..	109,447,111	12,100,490	2	2	10	8	508,448	12,608,938
1873..	112,392,362	12,190,600	2	2	10	7	467,343	12,657,943
1874..	112,392,362	12,342,251	2	2	10	6	461,511	12,803,762
1875..	115,646,631	12,483,133	2	2	10	6	711,313	13,194,446
1876..	119,079,589	12,092,087	2	0	10	1	813,308	12,905,395
1877..	124,587,474	12,049,046	1	11	9	11	899,128	12,948,174
1878..	127,948,380	12,585,677	2	0	10	2	904,035	13,489,712
1879..	131,021,019	12,913,797	2	0	10	4	957,321	13,871,118
1880..	133,769,875	13,033,655	1	11	10	3	967,857	14,001,512
1881..	135,645,473	13,202,088	2	0	10	4	1,038,504	14,340,592
1882..	139,636,307	13,947,681	2	0	10	8	970,592	14,918,273
1883..	141,407,686	14,091,519	2	0	10	8	1,146,592	15,238,111
1884..	143,222,438	14,282,915	2	0	10	9	1,103,732	15,387,647
1885..	145,527,944	14,501,844	2	0	10	9	1,050,824	15,552,668
1886..	147,350,562	14,711,580	2	0	10	10	1,070,693	15,782,273
1887..	148,907,797	14,688,278	2	0	10	8	1,128,717	15,816,995
1888..	149,334,624	14,707,290	2	0	10	7	1,132,481	15,839,771
1889..	149,696,812	14,771,132	2	0	10	6	1,315,554	16,086,686
1890..	150,485,974	15,820,594	2	1	11	1	1,968,616	17,789,210
1891..	152,116,008	15,563,794	2	1	10	10	2,794,284	18,358,078
1892..	155,896,383	15,642,020	2	0	10	9	2,445,797	18,087,817
1893..	157,722,913	16,531,406	2	1	11	3	2,439,715	18,971,121
1894..	159,469,468	17,743,664	2	3	11	11	2,436,930	20,180,594
1895..	161,139,575	19,063,893	2	4½	12	8¼	2,483,058	21,546,951

The preceding figures show that the valuation of net rateable value has increased by £53,741,333 in the quarter of a century, the Poor's Rate by £7,452,973, and the total receipts by £9,425,511. But the rate in the £ has only increased by 2½d., and the rate per head of population by 2s. 4½d., caused by increase of valuation.

LOCAL GOVERNMENT AND TAXATION.

TABLE II.—Expenditure connected with Relief of Poor.

From date of Establishment of Local Govt. Board.	General Heads of Expenditure for Relief of the Poor.				Total Expenditure.				
	In-door Relief.	Out-door Relief.	Maintenance of Lunatics in Asylums, &c.	Salaries, Rations, Pensions, & Repayments.	Total Amount of Expenditure.	Rate per head of Population.		Rate in £ on Rateable Value.	
Years.	£	£	£	£	£	s.	d.	s.	d.
1871 ..	1,524,695	3,633,970	746,113	838,268	7,886,724	7	0	1	6
1872 ..	1,515,790	3,583,571	742,483	871,402	8,007,403	7	0	1	6
1873 ..	1,549,403	3,279,122	780,927	893,218	7,692,169	6	8	1	4
1874 ..	1,649,333	3,110,896	830,454	909,231	7,664,957	6	6	1	4
1875 ..	1,577,596	2,958,670	859,073	929,723	7,488,481	6	3	1	3
1876 ..	1,534,224	2,760,804	883,267	942,581	7,335,858	6	1	1	3
1877 ..	1,613,757	2,616,465	911,426	972,217	7,400,034	6	1	1	2
1878 ..	1,727,340	2,621,786	957,119	997,308	7,688,650	6	3	1	2
1879 ..	1,720,947	2,641,558	986,050	1,023,197	7,829,819	6	3	1	2
1880 ..	1,757,749	2,710,778	994,204	1,053,218	8,015,010	6	4	1	2
1881 ..	1,838,641	2,660,022	1,033,780	1,069,188	8,102,136	6	3	1	2
1882 ..	1,831,595	2,626,375	1,059,460	1,087,641	8,232,472	6	4	1	2
1883 ..	1,869,505	2,589,937	1,098,322	1,117,705	8,353,292	6	4	1	2
1884 ..	1,992,502	2,517,693	1,143,146	1,297,871	8,402,550	6	4	1	2
1885 ..	1,921,587	2,469,846	1,188,012	1,356,943	8,491,600	6	4	1	2
1886 ..	1,837,624	2,490,025	1,175,072	1,332,017	8,296,230	6	1	1	2
1887 ..	1,778,367	2,528,250	1,159,750	1,313,425	8,176,768	5	11	1	1
1888 ..	1,855,304	2,537,686	1,167,765	1,342,079	8,440,821	6	1	1	2
1889 ..	1,862,799	2,503,838	1,184,766	1,360,065	8,366,477	5	11	1	1
1890 ..	1,899,648	2,453,860	1,221,719	1,394,687	8,434,345	5	11	1	1
1891 ..	1,951,486	2,400,089	1,284,656	1,452,810	8,643,318	6	0	1	2
1892 ..	2,044,062	2,374,380	1,331,733	1,496,340	8,847,678	6	1	1	2
1893 ..	2,105,760	2,370,613	1,393,076	1,566,506	9,217,514	6	3	1	2
1894 ..	2,198,312	2,460,503	1,466,185	1,629,061	9,673,505	6	6	1	3
1895 ..	2,216,231	2,530,574	1,502,400	1,666,952	9,866,605	6	6¾	1	3½

A glance at the above table shows that the expenditure has increased in twenty-five years by £1,979,881. The expenditure in relief, in-door and out-door, decreased by £411,860; but the cost of lunatics increased by £756,287; the increased cost of supervision, in salaries, rations, provisions, &c., was £828,684. That is how the money goes!

LOCAL GOVERNMENT AND TAXATION.

TABLE III.—EXPENDITURE UNCONNECTED WITH RELIEF OF POOR.

From 1870 to date.	Expenditure unconnected with Relief of the Poor, but with the Rates.							Aggregate Expenditure connected with and unconnected with Poor Relief.
	County, Borough, and Police Rate.	Highway, Rural and other Boards.	School Board and Committees.	Registration and Fees.	Vaccination Fees and Expenses.	Parl. and Jury Lists, &c., &c.	Total Expenditure unconnected with Relief of Poor.	
YRS.	£	£	£	£	£	£	£	£
1871	2,708,840	648,846	..	78,323	73,175	70,373	3,579,557	12,092,741
1872	2,798,344	658,489	..	79,350	112,942	75,598	3,724,723	12,381,278
1873	3,041,808	728,023	62,791	80,429	100,557	81,175	4,094,783	12,426,566
1874	3,310,416	905,095	99,314	80,559	79,111	83,648	4,568,142	12,851,007
1875	3,252,656	931,933	160,766	83,173	81,579	85,047	4,595,154	12,694,208
1876	3,228,770	929,346	232,526	92,678	82,088	85,205	4,650,613	12,636,942
1877	3,334,020	1,001,278	339,590	93,244	88,402	87,374	4,943,908	12,998,237
1878	3,457,952	1,088,539	459,794	92,744	92,275	89,868	5,281,172	13,615,297
1879	3,232,226	1,117,394	573,841	94,160	87,754	91,623	5,196,998	13,693,184
1880	3,410,327	1,100,374	629,197	92,881	86,879	96,315	5,416,973	14,092,102
1881	3,588,308	1,020,017	674,716	92,674	87,745	114,641	5,578,101	14,390,262
1882	3,809,992	1,128,225	724,709	91,585	97,196	118,618	5,970,325	14,864,739
1883	3,846,534	1,111,040	741,265	92,861	91,883	207,336	6,090,927	15,057,179
1884	4,101,421	1,062,277	767,496	93,905	91,938	197,037	6,314,074	15,356,791
1885	4,301,590	1,093,226	793,938	95,547	94,618	181,750	6,560,678	15,731,866
1886	4,409,522	1,071,263	804,719	92,980	93,475	233,286	6,705,245	15,690,714
1887	4.516,960	1,068,455	789,313	94,057	92,116	247,906	6,808,807	15,689,293
1888	4,522,249	1,052,527	801,636	94,914	90,487	357,272	6,819,085	15,965,961
1889	4,532,846	1,088,950	822,147	92,025	91,254	273,324	6,900,546	15,970,126
1890	6,238,420	1,007,397	838,395	92,682	85,606	294,699	8,557,199	17,735,714
1891	6,171,171	1,006,463	896,964	94,693	84,295	327,815	8,581,401	17,985,275
1892	6,301,786	1,045,807	973,640	100,916	83,146	327,739	8,833,034	18,454,460
1893	6,739,977	1,122,251	1,023,030	98,419	83,709	330,638	9,398,024	19,411,897
1894	7,223,990	1,222,769	1,072,730	97,159	87,981	348,466	10,053,095	20,527,430
1895	7,868,362	1,166,175	1,164,920	92,400	82,961	426,576	10,801,394	21,176,212

The above table shows an enormously growing expenditure under each head. The County, Borough, and Police expenditure has trebled, and the others in proportion. The aggregate expenditure connected with, and unconnected with, the Poor's Rate has increased by £9,083,471 since 1871.

TABLE IV.—Aggregate Receipts of all Local Authorities.

The aggregate receipts of all the Local Authorities enumerated are given in the following table, under the several heads as presented in the last Annual Report of the Local Government Board. Loans are excluded, and deductions are made to avoid duplicate reckonings:—

Sources of Income.	1889–90.	1890–1.	1891–2.	1892–3.
	£	£	£	£
From Public Rates	27,713,409	27,818,642	28,507,119	30,201,903
Treasury Subventions & Payments	2,194,838	1,696,340	1,782,333	2,598,783
Do. out of Local Taxation Account	4,327,441	5,484,670	6,330,484	6,439,508
Tolls, Dues, and Duties	3,642,423	3,473,876	3,430,602	3,338,355
From Real and Funded Property..	1,379,823	1,438,113	1,469,879	1,616,263
,, Sales of Property	513,001	303,104	343,317	264,981
Fees, Fines, Penalties, and Licences.	1,733,348	1,250,464	1,232,646	658,268
Revenue from Waterworks........	2,515,217	2,608,928	2,683,496	2,723,303
,, ,, Gasworks	3,867,416	4,227,021	4,297,000	4,333,589
,, ,, Markets, Harbours, Piers, and Docks, Cemeteries and Burial Grounds, Sewage Farms, &c., Baths and Wash-houses, Bathing Places, Libraries and Museums, Fire Brigades, Asylums, Hospitals, Slaughter-houses, and Tramways	950,500	1,001,384	1,069,585	1,096,032
Repayments (Private Improvements)	773,438	789,694	880,566	926,517
Aggregate Amounts*	50,237,862	51,437,425	53,337,213	55,549,402

The foregoing table represents the sources of revenue and total income, the figures given being for the four last years for which the figures are available. The first line under the head of Treasury subventions and payments includes grants to schools, London Fire Brigade, Police, prisoners, &c.; the second line, payments to councils of counties and boroughs. "Tolls, Dues, and Duties" include market rents, &c., &c. "Fines, fees," &c., include school fees, books, &c. The growth of expenditure is indicated by the increase of the total receipts from £50,237,862 to £55,549,402 in four years, an increase of £5,311,540. Treasury subventions increase roughly at the rate of nearly a million sterling a year.

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* The difference in the totals arises from deductions, &c.

TABLE V.—Average Rates in the £, Metropolitan and Provincial.

The following table presents at one view the average rate in the £ for the several purposes named, and by what general authority raised. The figures are from the last Report of the Local Government Board; though the items may vary from year to year, the comparative averages remain about the same, and therefore they are a tolerably safe guide generally:—

	1890-1.		1891-2.		1892-3.	
	s.	d.	s.	d.	s.	d.
Local Authorities Specified :—						
(*a*) *Metropolitan :*						
The Poor Law Authorities	1	3·3	1	4·5	1	3·4
Metropolitan Vestries and Local Boards	1	3·6	1	4·1	1	5·2
Commissioners of Sewers (City of London)	1	7·7	1	0·9	1	5·8
London County Council—General Purposes	0	11·2	0	9·5	0	10·1
„ „ „ Special County Purposes	0	2·1	0	2·3	0	2·4
Commissioners of Police of the Metropolis	0	5·4	0	5·0	0	5·0
Corporation of London (Police and Ward Rates)	0	5·8	0	5·6	0	5·9
School Board for London (by precept)	0	9·9	0	11·0	0	10·6
(*b*) *Extra Metropolitan :*						
The Various Poor Law Authorities	0	10·9	0	9·8	0	10·5
County Councils—General Purposes	½d. to 7d.		½d. to 8d.		¼d. to 9d.	
„ „ Special County Purposes	¼d.to7¼d.		¾d.to6¾d.		½d.to7¾d.	
Municipal Authorities—County Boroughs	0	7·9	0	8·3	0	8·5
„ „ Other Boroughs	0	5·7	0	6·0	0	6·1
Town Councils, as Urban Sanitary Authorities						
„ „ In County Boroughs	2	5·6	2	6·6	2	7·8
„ „ In Other Boroughs	2	4·8	2	6·2	2	5·4
Local Boards and Improvement Commissioners	2	4·1	2	4·5	2	5·2
Rural Sanitary Authorities	0	1·9	0	1·9	0	2·1
School Boards—Boroughs in England	0	6·5	0	7·0	0	7·5
„ „ „ in Wales	0	6·4	0	7·5	0	7·9
„ „ Parishes in England	0	6·8	0	6·8	0	7·2
„ „ „ in Wales	0	8·0	0	7·8	0	11·1
Highway Authorities—Rural Districts	0	6·0	0	6·1	0	6·7

No general average can be given of the above, as the districts covered by the several authorities differ very considerably from each other.

TABLE VI.—COMPARATIVE RATES, METROPOLITAN AND PROVINCIAL.

The following represent the total receipts from Rates, and the average rates in the £ calculated on the Poor Rate valuations, together with the average rates per head of population for the last three years for which the complete figures are available. The figures are arranged in the following form: (*a*) Metropolitan Rates and Rating; (*b*) Extra-Metropolitan Rates and Rating; (*c*) The Totals for England and Wales. The amounts may and do differ from year to year, but the methods and the general results are the same however varying the conditions:—

	METROPOLITAN.		EXTRA-METROPOLITAN.		ENGLAND AND WALES.	
	(*a*) Total Rates.	Amount in the £.	(*b*) Total Rates.	Amount in the £.	(*c*) Total Rates.	Amount in the £.
Years.	£	s. d.	£	s. d.	£	s. d.
1890–1	7,929,946	5 0·2	19,888,696	3 3·6	27,818,642	3 7·9
1891–2	8,316,298	5 0·4	20,190,821	3 3·5	28,507,119	3 7·9
1892–3	8,509,795	5 1·2	21,692,108	3 5·9	30,201,903	3 10·0

The amount per head of the estimated population was as follows:

	£ s. d.	£ s. d.	£ s. d.
1890–1	1 17 11	0 16 2	0 19 4
1891–2	1 19 5	0 16 3	0 19 7
1892–3	1 19 11	0 17 3	1 0 7

The preceding figures show that the Metropolitan rates greatly exceed the proportions in the Extra-Metropolitan Districts as regards the rates in the £ and the amounts per head of population. The excess shows, roughly, about 1s. 9d. in the £ higher than in the Urban and Rural Districts, and, roughly, about 1s. 5d. above the averages for the whole of England and Wales. The complaint also is that London does not receive its fair proportion of the Treasury subventions. The following represent the allocated amounts:—The Metropolis, 1¾d. in the £; Boroughs, 4¾d. in the £; and Counties, 3¾d. in the £. The relief thus afforded to Local Rates will be further disturbed by the Rating Bill now before Parliament if carried in the form in which it was introduced.* In any case some change will be effected by that measure.

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* See Note, page 418.

LOCAL GOVERNMENT AND TAXATION.

TABLE VII.—Treasury Subventions and Payments to Local Authorities.

The following represent the amounts of Treasury subventions and payments to the various Local Authorities during the three last years for which the complete figures are available, inclusive of payments from the Local Taxation Account, but excluding contributions in lieu of Rates on Government property. The amounts may vary, but the results are the same :—

The Local Authority to whom Paid :—	1890–1.	1891–2.	1892–3.
(a) Metropolitan :	£	£	£
Poor Law Authorities	246,600	116,314	123,412
Metropolitan Vestries and Boards..	957	1,171	1,319
The London County Council......	237,218	411,764	519,754
Commissioners of Police (London)	722,562	745,150	760,054
Corporation of City of London	433	410	380
Pauper Lunatic Asylums Committees	388	506	553
School Board for London	353,576	349,862	530,543
Total amount—Metropolis....	1,561,734	1,625,177	1,936,015
(b) Extra-Metropolitan :			
Poor Law Authorities	1,719,130	1,494,229	1,485,938
County Authorities	1,595,472	2,874,228	2,629,443
Commissioners of Police (Metropolis)	207,002	206,127	213,032
Pauper Lunatic Asylums Committees	2,484	2,452	2,273
Municipal Corporations	750,122	1,092,908	1,047,092
Urban Sanitary Authorities and Boards	118,612	117,379	157,559
Rural Sanitary Authorities	58,578	42,741	45,008
Port Sanitary Authorities	1,018	1,402	1,222
School Boards (excluding London)	1,091,509	1,162,452	1,788,708
Highway Authorities—Rural Districts	....	321	525
Total amount (excluding Metropolis)*	5,543,927	6,953,362	7,313,422
Deduct items to avoid duplicates..	1,820,595	1,900,537	1,438,761
Net aggregates of (*a*) and (*b*)*	5,285,066	6,678,002	7,810,676
Balances due to Local Authorities..	1,743,488	1,393,441	1,206,900
Otherwise distributed by L. G. B...	157,049	45,320	25,061
Total amounts of Subventions, &c.*	7,185,603	8,116,763	9,042,637

The last total includes all subventions and payments, including Taxation Account, interest, and all other items, details of which need not be given.

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* The difference in totals arises from distributive items, &c.

TABLE VIII.—Aggregate Expenditure of Local Authorities.

The following table presents at one general view the principal items of the aggregate expenditure, and by what authority it is expended, during the last four years for which the complete figures are available. The expenditure given is exclusive of the amounts defrayed out of loans, and the necessary deductions are made to avoid duplicate reckonings. In a word, the payments represent the gross expenditure out of revenue, and receipts from all sources except loans:—

Purposes of Expenditure:	1889–90.	1890–1.	1891–2.	1892–3.
	£	£	£	£
Relief of the Poor	6,607,299	6,737,901	6,871,236	7,184,158
Pauper Lunatics and Asylums ..	1,505,691	1,632,780	1,719,612	1,766,932
Police and Pension Funds	3,899,846	4,145,575	4,482,578	4,696,864
Prosecutions and Prisoners	208,760	208,096	213,013	218,397
Education and Schools	4,056,696	4,305,286	4,838,021	5,425,341
Highways, &c., and Improvements	5,890,554	6,162,189	6,684,834	7,247,853
Gasworks (Local Authority)	2,822,001	3,263,974	3,454,449	3,480,925
Public Lighting	938,043	973,212	1,024,997	1,045,230
Waterworks (Local Authority) ..	888,393	969,277	982,593	1,010,008
Sewerage and Sewage Works	979,489	1,067,364	1,139,362	1,223,836
Markets and Fairs	288,248	282,724	297,011	324,383
Cemeteries and Burial Grounds ..	255,674	268,870	294,021	301,603
Fire Brigades	219,133	229,997	247,794	255,802
Public Buildings, Offices, &c.	178,479	213,666	227,823	242,185
Parks, Open Spaces, Commons, &c.	280,090	272,911	334,305	346,139
Public Libraries and Museums ..	190,785	220,479	264,890	285,334
Baths, Washhouses, &c.	143,188	155,530	167,033	209,844
Bridges and Ferries	403,748	199,278	178,539	177,249
Artisans and Labourers' Dwellings	14,528	18,158	15,217	42,227
Contagious Diseases (Animals) Act	101,824	125,491	41,010	43,705
Hospitals and Infirmaries	154,959	187,677	182,011	313,344
Carried forward....£	30,027,428	31,640,435	33,660,349	35,841,359

AGGREGATE EXPENDITURE OF LOCAL AUTHORITIES—*continued.*

PURPOSES OF EXPENDITURE:	1889–90.	1890–1.	1891–2.	1892–3.
	£	£	£	£
Brought forward....	30,027,428	31,640,435	33,660,349	35,841,359
Harbours, Piers, Docks, &c.......	1,245,247	1,429,249	1,335,302	1,370,402
Slaughter-houses, &c.	13,977	14,884	15,511	19,242
Land Drainage, River Embankments, &c.	270,267	252,818	249,672	281,364
Tramways (Local Authority)	28,162	38,570	48,237	51,818
Allotments, &c.	*	*	6,783	8,899
Other Public Works, &c.	2,401,082	2,607,453	2,749,819	2.972,273
Private Improvement Works	567,152	580,960	697,595	766,218
Principal and Interest of Loans, &c.	11,084,907	11,393,715	11,446,355	11.909,913
Salaries, Superannuation, &c.	1,539,643	1,627,849	1,687,498	1,775,743
Establishment Charges..........	464,111	484,994	517,114	556,462
Legal and Parliamentary Expenses	134,410	195,658	184,747	151,845
Aggregate Expenditure....	47,776,386	50,266,585	52,588,982	55,705,538

With respect to the foregoing heads of expenditure, various details are given as to special items in the tables (I., II., and III.) relating to the Poor Rate, Valuation, and Expenditure, which need not be repeated. The large increase of expenditure under the head of "Police" has mainly arisen in connection with Police Pension Funds under the Act of 1890. The large item under the head of "Bridges, &c.," in 1889–90, was due to the freeing of some Thames bridges in that year and former years. The Housing of the Working Classes Act, 1890, will account for the increase under that head. Payments in respect of principal and interest of Loans only include such Loans as are raised for the purposes specified in the table. In the three last items only a portion of the salaries, charges, and legal expenses are included, as some are paid in connection with the particular purposes specified. It will be observed that the expenditure increased by £7,990,542 (or nearly eight millions sterling) in four years, very little of which went in repayment of Loans.

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* First separately specified in 1891–2.

TABLE IX.—LOANS RECEIVED BY LOCAL AUTHORITIES IN EACH YEAR.

PURPOSES FOR WHICH RECEIVED:—	1889–90.	1890–1.	1891–2.	1892–3.
	£	£	£	£
For Poor Law purposes.........	385,285	365,131	328,787	543,100
,, Lunatic Asylums, &c.......	216,330	149,193	55,652	486,895
,, Police Stations, Gaols, &c. ..	50,722	183,059	42,645	89,094
,, Schools, including Reformatories, &c.	941,220	840,584	1,108,810	1,412,388
,, Highways, &c., Improvements	1,207,137	677,874	895,485	1,239,104
,, Gasworks	193,922	323,068	396,266	401,985
,, Electric Lighting and Supply	....	10,000	100,997	115,248
,, Waterworks	1,332,389	868,165	1,648,452	1,625,393
,, Sewerage and Sewage Works..	674,387	1,060,612	1,011,213	1,572,553
,, Markets, &c.	104,748	50,173	182,721	192,767
,, Cemeteries & Burial Grounds	78,480	117,313	142,625	148,445
,, Fire Brigades	47,118	40,517	43,531	44,139
,, Public Buildings and Offices..	84,150	193,985	130,754	309,551
,, Parks, Open Spaces, &c.	258,957	184,494	241,941	603,656
,, Libraries and Museums	55,096	28,995	37,867	132,350
,, Baths, Washhouses, &c.	43,503	111,313	139,394	124,509
,, Bridges and Ferries	288,517	61,496	12,522	303,191
,, Artisans, &c., Dwellings	92,109	5,533	76,825	264,352
,, Hospitals and Infirmaries....	23,650	42,024	104,456	95,108
,, Harbours, Piers, Docks, &c...	436,569	389,783	355,933	295,565
,, Land Drainage, Embankment, &c.	33,928	56,816	18,973	37,080
,, Tramways	1,050	60,157	46,589	58,996
,, Slaughter-houses, &c.	13,760	5,729	5,013	8,693
,, Allotments	5,360	6,020	1,650	6,360
,, Private Improvement Works..	150,061	150,349	157,896	184,810
,, Manchester Ship Canal, advances	....	....	2,225,599	774,401
Aggregate for all purposes	6,718,448	5,982,383	9,512,096	11,069,734

Many of the purposes above enumerated will be profitable works and sources of revenue; others will promote intelligence, pleasure, health, and comfort in the different localities; all perhaps will be beneficial to the districts affected and to the nation generally in some degree.

LOCAL GOVERNMENT AND TAXATION.

TABLE X.—EXPENDITURE OUT OF LOANS BY LOCAL AUTHORITIES.

PURPOSES FOR WHICH EXPENDED :—	1889–90.	1890–1.	1891–2.	1892–3.
	£	£	£	£
For Poor Law purposes........	432,418	339,103	323,457	404,000
,, Lunatic Asylums	141,949	276,149	270,363	211,807
,, Police Stations, Gaols, &c. ..	77,485	101,449	98,755	90,528
,, Schools and Reformatories, &c.	762,833	808,924	1,041,224	1,235,176
,, Highways, &c., Improvements	840,232	985,382	992,994	944,318
,, Gasworks..................	241,001	288,630	477,201	547,473
,, Electric Lighting and Supply	....	14,057	81,315	165,465
,, Waterworks................	1,338,932	1,249,674	1,334,290	1,367,529
,, Sewerage and Sewage Works..	879,435	1,103,722	1,152,920	1,192,080
,, Markets, &c.	96,770	79,126	184,488	126,749
,, Cemeteries & Burial Grounds	96,353	111,532	121,474	118,745
,, Fire Brigades	33,782	49,321	57,833	78,673
,, Public Buildings, Offices, &c..	161,323	222,342	207,637	220,769
,, Parks, Open Spaces, Commons, &c.	432,126	286,959	228,176	457,174
,, Libraries and Museums	40,696	44,459	41,019	82,720
,, Baths, Washhouses, &c.	70,279	94,086	140,439	51,562
,, Bridges and Ferries	218,719	169,041	204,965	324,370
,, Artisans, &c., Dwellings	71,199	25,008	85,917	255,989
,, Hospitals and Infirmaries ..	53,460	73,697	75,132	101,235
,, Land Drainage, Embankment, &c.	45,212	15,730	36,677	20,360
,, Harbours, Piers, Docks, &c...	559,927	401,374	534,746	497,001
,, Tramways (Local)	36,116	18,195	47,770	57,427
,, Slaughter-houses	4,986	11,259	5,787	3,395
,, Allotments	5,077	5,542	5,417	2,865
,, Private Improvement Works	172,136	167,399	167,303	178,716
,, Manchester Ship Canal (advances)................	....	....	2,115,500	884,500
Aggregate Expenditure..........	6,812,446	6,942,160	10,032,799	9,620,626

It will be seen that the expenditure is below the total amounts raised, the balance being, of course, for the completion of the works. The same remarks apply as to the remunerative character of many of the "purposes," and also to the beneficial nature of the purposes generally.

TABLE XI.—OUTSTANDING LOANS AT THE END OF EACH FINANCIAL YEAR.

PURPOSES FOR WHICH RAISED :—	1889–90.	1890–1.	1891–2.	1892–3.
	£	£	£	£
Poor Law purposes	7,037,304	7,056,166	7,012,550	7,182,997
Lunatic Asylums	3,557,436	3,686,662	3,541,423	3,531,058
Police Stations, Gaols, &c...	1,019,301	1,122,548	1,121,971	1,161,884
Schools, Reformatories, &c.	18,240,088	18,616,269	19,270,092	20,182,804
Highway, &c., Improvemts.	28,828,949	28,275,890	28,664,091	29,371,831
Waterworks	37,730,323	38,325,912	39,888,783	41,228,464
Gasworks	14,851,731	14,991,197	15,266,521	15,533,605
Electric Lighting, &c.	....	56,942	155,521	273,548
Public Lighting	52,708	46,095	35,270	31,923
Sewerage, &c., Works	19,352,382	19,969,077	20,487,354	21,430,443
Markets	5,406,289	5,380,982	5,506,677	5,592,941
Cemeteries and Burial Grds.	2,470,330	2,492,185	2,553,929	2,607,161
Fire Brigades	471,425	489,741	532,699	559,210
Public Buildings, Offices, &c.	4,234,431	4,315,707	4,340,858	4,557,028
Parks, Open Spaces, &c. ..	3,743,387	3,992,137	3,923,701	4,456,578
Libraries and Museums ..	472,573	489,693	513,096	635,334
Baths and Washhouses, &c.	867,403	950,308	1,055,053	1,146,652
Bridges and Ferries	4,084,200	4,053,596	4,009,230	4,232,631
Artisans, &c., Dwellings ..	3,835,490	3,814,035	3,854,287	4,052,114
Cattle Diseases Prevention	87,619	76,239	64,489	52,357
Hospitals and Infirmaries ..	629,261	669,234	759,429	821,840
Harbours, Piers, Docks, &c.	31,114,487	31,466,462	31,690,423	31,948,925
Land Drainage, &c.	3,136,884	3,147,417	3,055,098	2,995,227
Tramways	1,276,410	1,317,555	1,340,868	1,295,702
Private Improvement Wks.	944,399	940,969	941,181	977,591
Charged in Church Rates ..	7,600	6,100	4,600	1,300
Allotments	8,249	14,164	15,630	21,751
Slaughter-houses, &c.	104,902	121,631	122,735	127,038
Manchester Ship Canal	....	....	2,225,599	3,000,000
Other purposes	5,105,751	5,330,545	5,570,935	6,333,608
Aggregate Amounts ..	198,671,312	201,215,458	207,524,093	215,343,545

It is often pointed out that Local Loans are accumulating so vastly and rapidly that they constitute, in the aggregate, another huge National Debt. That is the case, with this additional disadvantage, that the interest payable on local indebtedness is much higher than that payable on the "National Debt," a fact which may lead, some time or another, to some mode of "conversion." But when we have said this much we have stated most of the chief complaints against Local Loans in the aggregate, whatever may be said of some particular loans, or as regards the local purposes to which they are applied, and for which they were in the first instance raised. "Local Indebtedness" is favourably distinguishable from our War Debt in many ways, amongst which are the following: (1) The Loans have been raised for good and laudable purposes, within the kingdom. There is no taint of blood upon them, British or foreign. (2) They have been, and are being, expended at home locally, and they have given, and are giving, employment to thousands of British workers, the whole earnings of whom go to enrich the locality and the nation. (3) The purposes may all be described as good. (*a*) For Poor Law purposes and for Asylums, taking care in some form of the poor, the needy, and the sick. (*b*) Protection to Life and Property. (*c*) Personal Improvement of the People by Schools, Reformatories, Industrial Schools, Public Libraries, and Museums. (*d*) Health and Recreation by Parks, Open Spaces, Commons, &c.; by Sewerage Works, Baths and Washhouses, Cemeteries and Burial Grounds, Improved Dwellings for the Poor, Allotments, Hospitals, &c. (*e*) Conveniences by Lighting, Good Roads for Locomotion, Bridges, Ferries, &c. (*f*) Safety by Fire Brigades. (*g*) Food, by Markets, the Supply of Water; and (*h*) then there are all the Public Improvements of Highways and Streets, Docks, Harbours, Piers, &c. And it must ever be remembered that a large proportion of the money expended is reproductive, bringing in revenue from the works undertaken. While all such expenditure should be watched, yet it should not be regarded with absolute jealousy. Besides which all the Loans are being paid off—principal and interest—and there is at present £5,269,532 in Sinking Funds for repayment of outstanding Loans.

The Government of London.—The Government of London requires a brief notice apart from the general question of Local Government, by reason of the vastness of its area, its enormous population, its diversified authorities, and its immense contributions to taxation, Imperial and Local. Its largest area—the Metropolitan and City Police Districts—covers 443,421 statute acres, with a population of 5,633,806 inhabitants; of that total the City of London comprises 671 acres and 37,705 inhabitants. For the purposes of Local Government and administration there are seven other districts mapped out within the total area of about 690 square miles, inclusive of the City. The following only need be enumerated: City of London—Municipal and Parliamentary, 671 statute acres, and a population of 37,705. The Corporation of the City is unreformed; it is not under the Municipal Corporations Acts, but is governed by its own Charters and Acts of Parliament. Its income in 1893 was £731,403; its expenditure, £730,228; balance in hand, £1,175. But it has valuable properties. The London County Council covers an area of 75,442 statute acres, and has a population of 4,232,118. The income in 1893–4 was £2,898,271; the expenditure was £2,465,396. The area and population of the London School Board are the same as for the London County Council. The total income in 1894–5 was £2,995,232; the expenditure, £2,672,163; balance, £323,069. There are within the County of London area 72 parishes, and within the City 33 parishes, or a total of 105. The first-named 72 parishes are governed by 26 Vestries and 13 District Boards, constituted under the Metropolis Management Acts. The total income of these Authorities in 1893–4 was £3,780,350; the expenditure, £3,780,291. The Commissioners of Sewers administer the local affairs of the City of London, in respect of rates, &c. The total income in 1893–4 was £593,153; the expenditure, £596,843. The Metropolitan Police Accounts (exclusive of City of London) are administered by the Receiver for the Metropolitan Police District. The total income for the year 1893–4 was £1,876,326; the expenditure, £1,864,375—exclusive of income and expenditure from loans. The Asylums Board had an income of £319,515, and expended £337,256, exclusive of loans. The foregoing represent the several great groups of Local Authorities in the Metropolis.

The subject of London government can scarcely be dismissed without some reference to its peculiar position and condition. Rightfully speaking, there is no Municipal Government in the Metropolis. The small area of 671 acres constituting the City is not under the Municipal Corporations Act. The Corporation of West Ham is an independent authority under that Act, within the Metropolis. The City of London manages its own police; West Ham does not. The London County Council has no authority over the City or West Ham; it exercises no control over the Commissioners of Sewers, the Metropolitan Police Accounts, and very little over the Asylums Board. It has no power to take over the water supply of the Metropolis or the supply of gas. It exercises certain functions in connection with the Metropolitan Vestries and District Boards; but, practically speaking, the Vestries and Local Boards representing the London parishes are independent, as compared with those in the great Municipal Corporations of Manchester, Birmingham, Leeds, Liverpool, Bristol, and other great cities and towns in the kingdom. The result is that there is no uniformity either in the assessments or the rating; rich parishes are under-assessed and under-rated, while the poorer parishes are over-assessed and over-rated. Under recent Acts the assessment is becoming more uniform, and two clumsy expedients have been introduced with the view of a more equitable rating; one is the Metropolitan Common Poor Law Fund; the other is the "Equalisation of Rates Act," by which the under-rated parishes contribute towards the rates of the over-rated parishes. The only way to remedy the evils of London government is to place the Metropolis under the Municipal Corporations Acts, with such modifications as may be requisite for the administration of a vast province, in area, population and wealth, with due regard to its rateable value and its contributions to the National Exchequer, out of which the Metropolis ought to have its fair proportion of Exchequer contributions in aid of the rates relatively to all the other Local Authorities in the kingdom. It is not so treated now, mainly because of its inefficient local organisation.

General Remarks and Conclusions.—The foregoing pages present as complete a synopsis of Local Government and Taxation as could be presented within the limited space at my command. For this reason the information has been condensed into "tables," as giving in the smallest space and briefest form a general view of the whole case, Metropolitan and Provincial, with all their varying modes of administration and of taxation. The amount raised by local taxation is large in the aggregate, and the local indebtedness is great. But the purposes for which the rates are levied, and the loans effected are raised, are multifarious, and on the whole beneficent; the amount of taxation must therefore be considered by the light of the purposes for which intended, and to which the aggregate is applied. The object, generally speaking, is good government, in securing the safety of persons and property, and the promotion of the health and welfare of the whole community. The methods for attaining this end are very numerous, as shown by the several tables. Generally they comprise (1) Provision for the poor, the sick, needy, aged, and infirm, under the Poor Laws, by Guardians and Overseers in the Poor Law Unions, of one or more parishes as the case may be. (2) Provision for the health of the locality under the Public Health and Sanitary Acts, by the various Sanitary Authorities, Urban and Rural. (3) Purposes of public convenience, by the supply of gas, water, and means of transit—highways, roads, streets, &c., and in some places, of locomotion by tramways, &c. (4) Education—elementary and technical—libraries, museums, &c. (5) Recreation and health by parks, open spaces, &c., &c.; and by baths, washhouses, and public bathing places. (6) Accommodation by bridges, ferries, harbours, piers, docks, quays, &c. Many of the purposes are sources of revenue for all time, mostly paid for out of loans which are being repaid. The most important question is: Do we get value for our money? If we do the amount paid is of secondary importance. We have a right to expect efficiency and economy in administration and expenditure by all the Local Authorities; and in this respect they are responsible to the ratepayers, by whom they are elected. On the other hand it is essential that the best, simplest, and most effective organisation should exist, so that there shall be the least possible overlapping of authority and the most efficient mode of control, and also uniformity wherever practicable.

NOTE.—On page 398 I have referred to two measures before Parliament: (1) The Education Bill, which, after a good deal of discussion, was abandoned; that Bill need not, therefore, be further commented upon. (2) The Agricultural Rates Bill, now passed into law, somewhat modified in its provisions. The Agricultural Rates Act, 1896, exempts "Agricultural land from half the rates to which the Act applies," except a rate (*a*) which the occupier is liable to be assessed to pay in proportion of one half or less; (*b*) which is assessed in respect of drainage, wall, embankment, or other work for the benefit of the land." Any deficiency arising from the exemption is to be paid out of Local Taxation Account to each spending authority. The Local Government Board is to certify annually the amounts payable in respect of such deficiency to each spending authority under the Act. The operation of the Act is limited to five years, from March 31st, 1897. The other sections relate to procedure, valuation lists, and other details of administration. The provisions of this measure gave rise to much debate, and they were hotly contested by the representatives of many of the Urban constituencies in Parliament. The opposition led to the limitation of five years in Section 1 of the Act.

DROMCLOUGH CREAMERY.

Irish Creameries.

BY W. L. STOKES.

IN considering the question of Irish Creameries naturally the first thought that suggests itself is, "What led to their establishment, and how did the establishment of these Creameries come about?" and in dealing with this subject I will first give the reasons which I consider rendered them an absolute necessity, and will then treat with the manner of their formation, the difficulties that had to be overcome, the effect they have had upon the butter trade of the country, the action of the Co-operative Wholesale Society Limited in erecting Creameries, and the general working of the Creamery system.

That Ireland possesses great natural advantages for the production of the finest butter in the world cannot be for a moment denied, and that until recent years she stood for upwards of a century as the premier producing and butter exporting country in the world is an admitted fact. Its advantageous position to the west of Europe, watered by the Atlantic Ocean; and its equable climate, tempered by the vapours coming from the Gulf Stream condensed into copious rains by its many mountain ranges of moderate heights, has made it one of the best pasturing countries existing.

Surrounded on all sides by water, its climate has been beneficially influenced, never going to extreme heat in summer, and being free from winter frosts and snows; its range of temperature from the highest to the lowest point shows one of the most equable climates in Europe.

Butter making, then, became a leading industry at a comparatively early date. About twenty years ago the Cork Butter Market celebrated its centenary. This important market was established by a Charter granted by the Government. The well-known brands of Irish butter found their way to all parts of the civilised world; not only were they supplied for ships' use, but less than fifty years ago a large export trade was done as far away as Australia. Times change, and few would have thought then that we would be receiving such large quantities, and a promise of increased supplies, from the Australian colonies to-day. Irish butter found its way also to Portugal, the Brazils, and the settlements on the West Coast of Africa, as well as the shores of Newfoundland. With the rapid rise in England, however, of manufactures, the principal market for Irish firkin butter was found in the great industrial centres of the United Kingdom. The population of England increasing at such a rapid rate, a market was soon found for the surplus production of butter from Holland and France, which first found its footing in the London market. For many years the English trade was monopolised by these three sources of production. Some thirty years ago the butter trade was scarcely known in Denmark and Sweden, and what was known of it was altogether of an indifferent character. At that period the British Consul at Copenhagen wrote that he could get no decent butter to eat!

The price of butter continually advanced owing to the great prosperity of England and the demand for its consumption. In the year 1874 the lowest price registered for Cork Ordinary salt butter of first quality was 123s. per cwt., and in the month of October in the same year, at which time large stocks were laid in for winter use, prices rose to 153s. per cwt. These were figures to tempt an increased production in all grass countries. Denmark, feeling the profitable nature of supplying this big and highly prosperous demand, set about dairying on truly scientific principles. Sums of money were granted by Government, Dairy Schools and Colleges were opened, expert dairy instructors were sent travelling over the country, and everything was done to increase production and improve the quality for years.

Then came the beginning of the present revolution, and, as is invariably the case, the usual cause of political, social, or commercial revolution may be traced to a disregard by one class of the rights and feelings of another. The revolution which has taken place in the Irish butter industry is no exception to the general rule, and can be traced to the selfish and unwise policy of the makers of Irish butters towards consumers.

As in all other revolutions, the actual change appears to be rather sudden, and by many it is considered quite uncalled for and foolish. Such people are those who have a selfish interest in holding fast to the old ways, or think they have. To all interested in the progress of the world upon better lines the surprise is how patient the masses have been, and how long they have waited for the much-needed step forward. This revolution, like all others, had been preceded for a very long period by grumbling and discontent. The consumers had real cause for resisting the oppression of the butter makers, who for their own fancied interest refused to supply butter in the winter, excepting over-held summer make, and refused to pay heed to the complaints of the masses who were their paymasters and, if they only knew it, their best friends.

The carelessness of Irish butter makers—and, for that matter, of English also—of the tastes of their consumers had very nearly brought them to ruin, for the masses of butter consumers revolted vigorously, and about a dozen years ago it became patent to all close observers that a revolution in the system of butter making all over the British isles was absolutely necessary. The English working man, as well as the upper and middle classes, had got a taste of better things than Irish butter held over for months after being made. Butter, which had formerly been looked upon as more or less of a luxury, now came to be regarded by the toiling masses as one of the most important means of sustaining life.

The Irish butter maker had practically said, "You must eat my butter that has been some months stored or do without the needed supply from me entirely during the winter months." The result of this foolish policy was the means by which the foreigner gained his footing in the English markets, and by the introduction of the "centrifugal separator" the dairy methods of the world have been revolutionised, and butter of a uniform quality, well made and mild in flavour, has been the result. This description found quick favour with consumers. Irish farmers of the old school, so long in possession of a practical monopoly for salt butter, paid little or no heed to the inroads made by this formidable competitor. For years dairy reformers preached to them in vain. Instead of improvement, the general characteristics in too many cases became worse even than before. The complaints became more general of over-salted, over-held, and stale butter. The supremacy of the Irish trade not only became seriously menaced, but absolutely undermined.

The well-to-do consumer in England was now getting an article quite to his liking from abroad. The Irish butter makers had been warned again and again about these matters, but to no purpose. Their great-grandmothers had done very well without such superfluous luxuries as strainers, &c.; why not they? Their grandfathers had stored butter for six months in the year, and cases were on record where it had been held over for a longer period; why should not they follow in their footsteps? Small wonder, then, that when the British public saw articles made in nice, sweet, clean factories, and sent forward for sale regularly week after week as fresh as it was possible to place them on the market, that they revolted and refused any longer to be bound down to use an article which compared so unfavourably with this butter made on scientific principles.

Thus the foreigner took the cream of the butter trade, leaving the Irish butter makers the lowest place. "The night is darkest before the morn"—so it is in mundane matters; so it was in the Irish butter trade. When things got to their worst they had to be mended or ended. The Irish butter makers would not remember and act upon the true old proverb, "A stitch in time saves nine." A few reasonable concessions on their part, such as straining their milk from the milking pail into the tankard and again into the settling pans and straining the cream into the churns, selling the produce fresh week by week, not over-salting or over-pickling, producing a reasonable quantity of milk in winter—not all in summer, when least required—would have kept their produce in high favour. These little stitches they refused to set, so that they have had to set the nine witb a vengeance now by having to pay many thousands of pounds sterling in the erection of dairy factories properly equipped with expensive machinery, which removes all offensive animal matter from the milk, and hence enables butter of the highest class to be produced. Added to this competitor, which was quietly taking possession of the market, another formidable foe appeared in the guise of margarine, which supplied the wants of more economical customers and competed advantageously with the lower description of Irish butter. It may be said in a sentence that Danish and Swedish butter on the one hand, and margarine on the other, came like slow but certain avalanches, threatening almost the very existence of the Irish butter trade. Farmers as a class are most headstrong and conservative in their habits and opinions, and whilst here and there a few of the enlightened sort did their best to improve their make, the great mass were impermeable to new ideas, arguments, persuasion, or exhortation. Nothing but the crushing down of prices to ruinous rates—each year becoming lower, until a crisis was reached in the farming industry, bringing about political complications—could bring the absolute truth home to their minds.

Having dealt so far with the question relative to the absolute necessity of changing the old system of butter production, the next matter of importance is to consider how this change was brought about, and the steps that were taken to establish Creameries throughout the country. In all revolutions the pioneers are men who have more zeal than knowledge or discretion. History is said to repeat itself, and in this instance the usual course of all revolutions was not departed from. A very worthy old Canon of the Church of Ireland—I allude to the Rev. Canon Bagot—acted as pioneer, fulminating with the greatest zeal against the errors of Irish butter makers, but, while he was able to analyse the defects, he was lacking in that technical knowledge which would enable him to synthesise. He could tear down a rotten system, but, when it came to building up, his experience was lacking and the results unsatisfactory. He early saw the new trend of affairs, and did his best to call the attention of Irish butter makers to the necessity of adapting themselves to the new methods. He went further by establishing what, in the first instance, were called Creameries, but not Creameries as we now know them. The method adopted was for the farmers to set their milk at home, and, after skimming the cream, to bring it to a central building. Here each man's cream was churned separately, paying him according to the weight of butter produced, and then all the different lots were taken and blended together. This was tried in various parts of the country, but we know of no instance in which it proved a success. The effort to obtain uniformity was only partial, as the creams were in different states of perfection—or imperfection—and the blending of different qualities, instead of producing one fine quality, really resulted in butter of a second-rate or medium character.

The first Creamery was established by Canon Bagot at Hospital in 1884, and with his influence and that of the Rev. Father Ryan a similar one was started at Galbally in 1884–5. Both these, however, simply gathered the cream, and churned separately for each farmer. A Creamery on similar lines was then started at Kenmare, which also proved a failure, as none of them produced the highest-class butter. This failure did more to retard the spread and progress of Creameries in Ireland than could possibly be estimated, as farmers who mixed themselves up in these ventures reported unfavourably of the results, and for some time the question of Creameries in Ireland was allowed to be a dead letter. In 1886 several private people started steam dairies on the Danish system, the first of these appearing in Limerick, directed by Messrs. Mc.Donnell and Dowdall, in this year. Another was started at Clonmel about the same period and on the same principle. The first public company was at Cahir, in 1886, erected under the Limited Liability Act by the farmers and their friends. This Creamery has proved quite a success, and is still at work. In a few instances private proprietors attending Dairy Shows in England caught sight of the centrifugal separator, and brought them to their farms for their own private use. At this time the general position of the Irish butter trade was publicly called attention to by a series of letters to the Dublin press. This had the effect of influencing the minds of farmers all over the country, and from this date may be taken the rapid development which has taken place in establishing Creameries throughout the South of Ireland. As soon as the result of the working of some of these

Creameries which had been erected became known, and the very fine quality of the butter produced was realised, they began to crop up in various localities with very great rapidity, in some instances by private proprietors expending their capital in the erection of steam dairies in established districts, and afterwards by various farmers joining together and promoting Creameries at their own expense under the Limited Liability Act.

Again there appeared to be a period of inactivity, and little or no headway was made in the years 1887 and 1888. About this time, or probably a little later, the Hon. Horace Plunkett came to the front as the special advocate of Co-operative Dairying, and in this work had the assistance of Mr. Robert Gibson, of Limerick, Mr. R. A. Anderson, of Mallow, and the writer of this article. These gentlemen, travelling through the country, addressed numerous meetings in favour of this system. The ground now was, however, better prepared than in the earlier stages of the movement, and farmers were more inclined to listen than when others had gone through the country advocating the establishment of Creameries. Still, the difficulties that had to be surmounted were almost insuperable, and for a long time the results were most disheartening. Meeting after meeting had been attended, and, although at most of these meetings farmers seemed to have approved of everything that had been said, still when any practical steps were about to be taken they were very slow to act, and I have known of cases where actually the site of the Creamery had been chosen, foundations opened, and the well sunk, when all was abandoned simply because the farmers of one part of the parish thought they had as good a right to have the Creamery near their doors instead of being near those of their neighbours. For a long time also there was an impression in the minds of the farmers that behind all this agitation there was some personal motive, and that those who were advocating this system, and who were interesting themselves in the improvement of the chief industry of the country, were working for their own benefit. Then, again, a powerful obstacle against the spread of Creameries was the erroneous impression that got abroad, and was circulated by enemies to the cause with the object of preventing the development of this system, viz., that skim or separated milk was injurious to calves. Some people went so far as to assert that chemicals of a deleterious character were introduced into the milk during its separation, and that it was these chemicals that accounted for the separation of the cream from the milk. This vexed question of the quality of the milk returned to the farmer has done more to prevent the progress of Creameries than anything else, and, while it is generally conceded that the skim or separated milk is poorer in quality and contains less fat than that which the farmer obtains from milk set in the home dairy, I think that it must be admitted that the increased produce obtained from separated milk will allow of the addition of some artificial food to supply the fats which have been removed by the separator, and that still the advantage will be altogether in favour of the farmer supplying the Creamery. The usual arguments used at these meetings were that unless the farmers did something to alter the present system of making butter it meant absolute ruin to the farming community. We pointed out to them the serious position of our butter trade, and told them for years past the growth of foreign competition had been enormous, and that in thousands of English homes the production of Normandy, Germany, Sweden, and Russia had supplanted the home-made product and added to the depression of British farming. We then explained the reason that brought about this was not altogether one of price, for our customers were for long most faithful in their purchase of home-made butter, but it had been brought about by the want of quality, which had driven them reluctantly to take the foreign brands. We also told them that England paid £12,000,000 annually for foreign butter, and asked them how much of this could be kept at home if butters were only made upon improved methods? We then asked them to compare the prices which they were getting for home-made butter at present with those that best Danish Creameries were realising and see how much they were losing. We also pointed out to them that for the past few years they had realised an average price of less than 9d. per pound for their home-made butter. We told them that it took on an average about three gallons of milk to make 1lb. of butter under the old plan of butter making, so that this system only returned them threepence per gallon for their milk, and that by adopting this new system of Co-operative Creameries they could calculate upon getting at least a penny a gallon more for their milk, and, taking the average yield of an Irish cow to be between 400 and 500 gallons in the season, they could see that they were losing at least £1. 10s. per annum on every cow by sticking to the old system. We also told them the history of farming abroad had been in many respects similar to their own at home. It had not paid farmers to grow corn, and Denmark and Germany, who used to send to us the produce of their cornfields, now import themselves. The great difference in comparing the systems of the Continent and this country is that, while in this country we had been slow to change, the foreigner had adapted himself more quickly to meet the altered circumstances, and had gone in for dairying with a will. Land had been laid down to grass in all directions, the number of cattle had increased, and, generally speaking, the pail fillers had taken the place of the harvesters. We then pointed out to them how easy it would be, by combination, to secure their own Creamery, and fully explained that the payments for share capital could be made so easy that the poorest of them would not feel it. In most Co-operative Creameries farmers take a £1 share for every cow they own. These shares are generally paid for by four instalments. The first instalment is always paid in cash, so generally is the second; but, to make it easy for everyone to join, the greater part of the share may be paid in the milk instead of money, and in some Creameries this is done by the shareholder consenting to a reduction of a penny per gallon in the price of his milk until he has paid up his share. Above all, we told them of the necessity of producing large quantities of butter with some approach to uniformity, and also the necessity of spreading this make over the winter as well as the summer months. After months of hard work some fruit began to appear, and a few Co-operative Creameries were started; but, like all other institutions in their infancy, they required most careful handling, and I regret to say some of them were not a success.

The want of success was caused altogether by petty jealousies and party differences amongst the members of the committee, and in more than one case I could instance examples where these party differences have brought ruin to the Creamery; as when the majority of the committee representing one party were in power those who differed from them refused to send their milk to the Creamery, and *vice versâ*. The milk supply fell off, the working expenses were not curtailed, and naturally heavy losses were the result.

Another evil which had to be contended with when establishing these Creameries, whether Co-operative Societies or Limited Companies, was the anxiety prominent members evinced to get their own immediate friends and relations appointed to the principal positions, such as managers and dairymaids, whether properly qualified or not. No matter how honestly inclined these parties were, or how zealously they attended to their duties, a certain amount of suspicion existed that their friends got better treatment than others who were sending their milk to the Creamery, and after some experience which had been dearly bought these errors were remedied, and now it is almost invariably the case to make the principal appointments solely upon the merits of the candidates, and an unwritten but firmly established rule exists that those selected must have no connection with the locality or with any of the suppliers from the district.

Another of the disadvantages of Co-operative Creameries, and Creameries worked as Limited Liability Companies, lies entirely in the selection of the managing committee. If keen business men can be got to act on the committee all is well ; but if the contrary be the case errors will occur. Sometimes it happens that serious mistakes are made by managers, and the committee are not quick enough to see them until too late. Frequently it happens that there are one or two men on the committee who are very large suppliers, and whose love of immediate gain is greater than their love for the continued welfare of the Creamery. Such men cause much trouble and mischief by always insisting upon the utmost possible, and sometimes impossible, price being paid for milk, with the result that at the year's end the profits take the form of a negative quantity. The question of human nature enters somewhat into the working of these Creameries, as when the price is being fixed for milk, and all are being paid according to quality, the directors may not wish to see their friends and relatives on the lowest scale. This is now avoided in most Creameries by the manager simply submitting a list of the average results of the milk tests without either names or numbers to enable the committee to identify the suppliers. But, whether favour be shown or not, should the outsiders or other shareholders who have no friends on the committee happen to receive only a secondary price to that of their neighbour, who is known to have a friend on the directorate, the former generally kicks up a fine row, and the manager enjoys a lively time. This sometimes leads to a great secession of patrons from the Creamery, and financial trouble or loss usually follows in its wake. These, however, can scarcely be called errors of the system, they savour more of the individual, but I mention them here so that anyone in future having to deal with Creameries may be prepared for them, and should Creameries go on increasing, as they are likely to do, these instances will help to point out how careful parties should be in electing only those men on the committee who are practically above suspicion.

In connection with the growth and spread of Co-operative Dairies in Ireland, it may prove interesting to note that the first of these dairies, namely, Dromcollogher, was registered as such on the 5th day of June, 1889, and that Mr. R. Gibson and the writer of this article were together responsible for its formation, and their names appear amongst the seven who signed the original requisition for registration, as may be seen from the appended rules and notice of registration.

It may also be interesting to mention that in this Co-operative Dairy and some others started about the same time, the Wholesale

Society, to show the interest they took in the movement and their approval of the work being done by their representative in Ireland, became shareholders, and still retain their shares.

RULES.

(a) The rules hereto annexed, entitled "General Rules for an Industrial and Provident Productive Society," and numbered 1 to 126, shall be the rules of this Society, subject to the Special Rules thereof.

(b) The rules next following, numbered I. to V., are the Special Rules of this Society, to which the General Rules therein referred to are respectively subject, and the interpretation clause thereof applies.

THE SPECIAL RULES OF THIS SOCIETY.

I. General Rule 3.—*The Name* of the Society is the "DROMCOLLOGHER CO-OPERATIVE DAIRY FACTORY SOCIETY LIMITED."

II. General Rule 3.—*The Special Object* of the Society is to carry on the trade of dairymen and general dealers in farm produce, both wholesale and retail; also the manufacture of butter, cheese, and other articles of dairy produce; or to carry on any other occupation or manufacture in any way allied to agricultural industry.

III. General Rule 4.—*The Registered Office* of the Society shall be at Dromcollogher, in the county of Limerick.

IV. General Rule 96.—*The Seal* of the Society shall have the device of a "Cream Separator," with the motto "Sure and Pure."

V. General Rule 114.—*The Net Profits* of the Society, after providing for the charges specified in General Rule 114, and for the payment of interest on share capital at the rate of 5 per cent per annum, shall be allotted at an equal rate per £, as follows:—

(1) *To the shareholders* in proportion to the amount of share capital held by each.

(2) *To the farmers who supply the milk and cream* in proportion to the quantity or value of milk and cream supplied by each to the Society during the period to which the division relates.

(3) *To the workers employed by the Society* in proportion to the wages earned by them respectively during the same period.

The profits apportioned under clause 2 shall be credited to the share account of the individual member to whom it is allotted, until his shares are paid up; afterwards they may be paid in cash.

The share of profits falling to the workers shall not be paid in cash, but shall be accumulated as a loan in the Society, bearing such interest as any general meeting may determine; and shall only be withdrawable in case of distress or leaving the employment of the Society.

P. Q. HANNIGAN.
D. O'L. HANNIGAN.
EDMOND JOCELIN.
DAVID AHERNE.
JAMES WALL.
W. L. STOKES.
ROBERT GIBSON.
MAURICE D. COLLINS, SECRETARY.

ACKNOWLEDGMENT OF REGISTRY OF SOCIETY.

The DROMCOLLOGHER CO-OPERATIVE DAIRY FACTORY SOCIETY LIMITED is registered under the Industrial and Provident Societies Act, 1876, this 6th day of June, 1889.

WM. F. LITTLEDALE,
Assistant Registrar for Ireland.

9, Upper Ormond Quay,
Dublin.

Having now dealt with the necessity that existed for the establishment of Creameries, and the manner in which their promotion was brought about, the next matter of importance to be dealt with will be the erection, working, and general management of these dairies.

In starting a Creamery the first essential point is to ascertain if there be sufficient milch cows within a two or two and a half miles radius of any given centre to supply a Creamery, and whether the owners of such cows are prepared to send the milk regularly to the proposed Creamery. We have found that it takes the milk of at least 500 cows to adequately supply a main or head Creamery; branch or auxiliary dairies may be run on the milk of from 300 to 400 cows, but I must here point out that the greater the supply of milk at any one Creamery the better, for as the supply of milk increases the working expenses or cost of production decreases, and this is one of the main objects to be aimed at. In a properly worked dairy the working expenses should not exceed 1d. per pound of butter produced, unless there be some special reason, such as selling largely in small parcels, &c., which should, of course, be compensated for by extra receipts. In some Creameries the cost of production does not exceed $\frac{5}{8}$d., while $\frac{3}{4}$d. to $\frac{7}{8}$d. is quite enough. Granted that the necessary supply of milk is procurable, the next step is the selection of a site, and too much care cannot be given to this very important matter.

One of the first considerations is a plentiful and continuous supply of spring water; without such supply failure is certain. The building should be erected in a position where it will be within convenient reach of the largest number of suppliers; if there are cross roads in a central part of the district it will be advantageous to build your Creamery there. The ground chosen should have a slight slope, and, to secure a good flow for the sewerage, should be on a slight elevation. Avoid building a Creamery on the sea-shore, near a large river (unless there is a bridge close by), or in a hollow. If water power is available, use it. Care must be taken that it will not fail in dry weather, but before finally adopting this power it is advisable to consult a competent engineer. The nearer the site is to a railway station the better. Generally no two Creameries should be built within less than three miles of each other, thus insuring a proper supply of milk without competition. Before finally adopting any particular site it will be necessary to ascertain what the farmers have been doing with their milk, what price they have averaged for their butter for the season, and whether a Creamery would be of advantage to that particular district or not.

Having decided upon a suitable site, the next question will naturally be your building, and, after a good deal of experimenting and practical experience, it has been found that most of those originally erected were deficient in many respects, either being put up with too great an idea of economy or confined in too small a space. Then, again, some dairies were started with felt roofs, and others with roofs of corrugated iron, both of which should be avoided. Those who have studied the question most carefully are unanimous in their approval of good stone buildings, slated roofs, and concreted or tiled floors. The drainage of and sewerage from the dairy must receive special attention, as nothing will be found more injurious than defective drainage and bad sewerage. As it is intended later on in this article to deal with the buildings lately erected by the Co-operative Wholesale Society, which are looked upon as the most approved plans for Creameries at present in existence, and as the dimensions of dairy, engine-room, offices, &c., will be then particularised, it will not be necessary to deal with this subject at greater length here.

The question of machinery is one of the greatest importance, and requires very great care and attention. In most dairies the engines are 6 to 8 h.p. with 8 to 10 h.p. boilers. The separators (two of which should be in every dairy) that are most favoured are those of the Alexandra and Alpha Lavaal pattern, both of which seem to give the greatest satisfaction, and separate from 250 to 350 gallons of milk per hour. No Creamery should be without a properly-constructed heating apparatus to raise the temperature of the milk before separating, and a refrigerator to cool the cream immediately after separation. Two large barrel churns capable of churning 100 gallons of cream at a time will be found an absolute necessity, and one large butter worker. Roughly speaking, the capital necessary for a Creamery dealing with the milk of from 500 to 700 cows would be about £1,000 to £1,200. From the date of declaring the contract for building until the Creamery is completed and ready for opening a period of four to five months must generally elapse.

Another important consideration is the selection of manager, as the success or non-success of the concern will mainly depend upon him, and to none but a man well up in all details of working and with a knowledge of accounts and some commercial ability should be entrusted the running of the business.

Perhaps our greatest drawback in Ireland is the scarcity of properly-trained and efficient managers. No doubt we have very many good men who have gained their knowledge by experience, but new factories have to pay a salary which will tempt away the experienced man or be satisfied with some fledgling from one of our Dairy Schools. Nothing is more needed in any country where Creameries are to be a success than a well-equipped Training Factory, where students can be taught and take part in all the details of management. Some of the large Creameries should receive an endowment from the Government and have arrangements for receiving pupils at a nominal fee. Our Dairy Schools are doing excellent work, but it should be borne in mind that they cannot do more than teach the elements of Creamery management. In the great effort to replace Ireland's dairies on a proper footing the efforts of the Dairy Schools at Glasnevin and Cork, under Professors Carroll and Smith, must not be forgotten. Their exertions have been indefatigable with regard to the great improvements in Irish dairying. Large numbers of dairymaids and dairymen have passed under their special training, receiving instruction in all branches of the art of butter making. Special courses have been arranged for managers of steam dairies to teach them everything to be learnt in connection with the system of centrifugal separating and the methods adopted in Denmark.

When the Creamery is in full working order and ready for supplies the question of delivery and payment arises. Farmers despatch their milk to the Creamery night and morning during the spring, summer, and autumn months, once a day during the months of November and December, and every alternate day in January and February. Having arrived at the Creamery, the milk of each farmer is weighed and measured separately, and then emptied from their tankards into large receiving tanks. Each farmer is provided with a milk pass book, in which the amount of milk he has delivered is immediately entered, and opposite to this entry is a column showing the quantity of separated milk and buttermilk he is entitled to take back with him, as in all cases 80 per cent of separated milk is returned free; and then after churning there is an additional 5 or 7 per cent of buttermilk also free. Thus, if a man sends 100 gallons of milk to the Creamery he gets back eighty gallons of separated milk and five to seven gallons of buttermilk. All that is retained is the butter fat that has been extracted. After the farmer has delivered his whole milk at the receiving platform and this milk has been emptied into the tank, it passes through the heating apparatus and then into the separators, from which the cream escapes by one outlet and passes through the refrigerator into the cream cans, while the skim or separated milk escapes by another outlet into a trough from which it is pumped into an open shoot running overhead and delivered into a tank at the extreme end of the building where delivery platform is, and where the farmers receive their full complement of skim milk in about fifteen minutes after they deliver their whole milk at the receiving platform.

In dealing with this subject I do not think it necessary for me to go into details as to the manner in which the cream is separated from the milk, as most of those who read this article will be quite conversant with the working of a separator. Suffice it to say that the separation of milk from cream is accomplished by centrifugal force. This force may be described as a force which induces a body to avoid a centre. When milk composed of materials of different densities is subjected to centrifugal force in the drum of a separator the heaviest portion is repelled from the centre around which the lightest portion collects. Advantage is taken of the principle involved, and by arrangements more or less ingenious the cream is able to escape by a tube or through an orifice placed near where it rises, while the separated milk escapes in a similar manner from that part of the drum in which it collects. The perfect separation of cream from milk by centrifugal force depends upon the speed of rotation of the drum or cylinder, the temperature of the milk, and the regulation of the flow of milk. If the speed or rotation is too low the whole of the fat globules do not collect; if the temperature is too low the speed must be increased, or if this is impossible the inflow must be decreased in order that the milk may remain longer in the cylinder. When the inflow is reduced the influence of centrifugal force is increased, and although the outflow of cream and milk combined will be equivalent, the outflow of cream will be decreased but of higher quality, and the skim milk increased.

Professor Long in his book, "The Elements of Dairy Farming," makes the following remarks:—

> The separator may be regarded as an established machine, but, superior as it is to every other system, for the reasons already given, the cream it produces does not ripen so perfectly as cream raised by gravitation upon shallow set milk. It is for science to discover some means of overcoming this difficulty, and we shall presently see that some advances have been made in that direction. We regard the separator, however, perfect as it is, as a half-way house. Until butter is produced directly from it neither inventors or the public will be satisfied. There are indications that this will be successfully accomplished.

I may say that I do not agree with all that Professor Long says in this respect, as the experiment has been unsuccessfully tried more than once of producing butter while the separation is in process.

After the cream has been collected from the separators it must be immediately put into cold water to ripen. Of course, the cream is, at this stage, perfectly sweet, like new milk, and if churned thus you would get butter certainly, but of a waterish and flavourless nature, lacking that lovely and nutty flavour or aroma so highly prized by connoisseurs of good butter.

The cream is now left to ripen, and it is at this stage the whole art of butter making comes in, for if over ripe you lose in flavour, and if under you lose considerably in produce—two serious and most important matters. But, as a general rule, cream ripens in winter in seventy-two hours and in summer from twenty-four to thirty-six. Cream is ripe when it has a sharp acid but by no means an unpleasant taste. The cream is now made into butter, washed, salted, and put into packages to suit customers. Given the working data correct, associated dairying has in principle only one defect, viz., the power of even the smallest taint to affect the whole. If but one farmer supplies tainted milk, and it escapes the vigilance of the manager, the entire produce for that day is injuriously affected. It is the same with undetected adulteration: every honest supplier carries part of the water burden on his back. Of course, it is also the same with the management. If a mistake be made—whether bad separating, bad manufacture, or bad selling—not one farmer alone but all will pay the penalty. In well-managed Creameries these defects play but a small part, and, in my opinion, they are far more than counterbalanced by the benefits accruing from the system—provided always, of course, that the district is suitable to the system.

In connection with the Creamery system, I wish to allude to the hand separator, which, I feel convinced, is going to take a prominent place in the future production of butter in this country. While possessing all the advantages claimed for the Creamery system in the production of butter, it has the additional one of enabling each farmer who has anything like a reasonable number of cows to produce the finest quality of butter in his own dairy. He has also the advantage of gaining an extra percentage of butter from the milk if separated while it contains the animal heat. There is also the great advantage of being able to give this separated milk to calves while it still contains this heat, and while it is perfectly sweet and unmixed with the milk from any other farm. It also gives that occupation in the home which I look upon as so necessary, and does away with the constant wear and tear of man and horse going to and returning from Creameries. I know of several farmers who, during the past few seasons, have adopted this system of producing butter, and they write in the most favourable terms of the result of their experience. They also speak most favourably of their feeding of calves, and the manner in which they have turned out when reared almost solely on this separated milk.

The following are .extracts from some of the letters received from the most intelligent farmers who have been using hand separators for some time. One writes :—

> The advantages I gain are as follow : A better price, a uniform article, and a larger return. My milk was given to the calves hot from the cow after being separated, and these calves were as good as ever I had. I got as good a price for them as my neighbours whose calves were fed on the old skim milk system, and I have not lost a calf since I began to use separated milk.

Another writes :—

> I think several farmers about here would adopt my system but that they consider the hand separators too dear, and expect they will be much cheaper before long. I certainly would advise any farmer with twenty cows to get one.

Another large farmer writes me as follows :—

> In reply to your note I am pleased to state that I have acted wisely in adopting the hand separator. I turn out much more butter, and far more marketable, and get a much higher price. The question of rearing calves, which to me is a matter of great importance, has been quite a success. I rear prime calves with a little help in the way of certain meal which I consider indispensable.

Another writes :—

> I consider in adopting the hand separator I have gained one-fourth more butter, together with a higher price; and sooner than adopt or go back to the old system I would give up butter making altogether.

I could give many more instances, if necessary, of the working of these hand separators during the past few years, but think those I have given will be quite sufficient to prove my statement that in the future production of Creamery butter they are going to take a prominent place.

When Creameries were first started great difficulty was experienced in arriving at the best method of payment for milk received, and in several Creameries all farmers were paid alike, no matter what the difference was in quality, the calculation being based on three gallons of milk going to 1lb. of butter, and payment made according to the current rate obtainable for best qualities. Other Creameries started paying the farmers on the basis of Cork Firsts, and again calculated on three gallons of milk producing 1lb. of butter. Both these systems were found to be most unsatisfactory, and were really an inducement to practise fraud, as the farmer whose milk was poor saw he was as well treated as his neighbour whose milk might be worth 1d. per gallon more, and the farmer whose cows were yielding a large amount of butter fat saw he derived no benefit from their doing so, and naturally had recourse to "the cow with the iron tail," so as to increase the quantity and lower the quality.

The next step in advance in this direction was the introduction of a small test churn into all dairies, in which three gallons of each supplier's milk was churned and a record kept of the number of ounces of butter produced from these three gallons, and payments were made based upon these calculations. Of course, no supplier sending milk to the Creamery was supposed to know on what day his milk would be taken, so, although this method of ascertaining the value of milk was defective in many ways, it was an improvement on the original methods, had a salutary effect upon the suppliers, and was the means of raising the standard of milk very considerably.

About this time (I allude to the year 1889–90) a machine was invented for testing milk by chemicals and ascertaining exactly the quantity of butter fat in each sample; this was followed by several others, and at present there are a large number in the market all claiming points of excellence over each other. With most of these machines twelve to twenty-four samples can be tested at the same time, and one or other of these machines rapidly found their way into most dairies and immediately found favour with the suppliers and those concerned in the management, as it was then quite easy to see the quality of every supplier's milk, and those whose milk deserved it got the full benefit, and those whose milk was inferior got a correspondingly low price.

To arrive at the value of milk, samples are taken from each supplier at least six times during the fortnight, and then an average of all the samples taken is made out, and, on the basis of this average, prices are settled. In addition to the tests made in each dairy it is now customary to send once during the fortnight the milk of every supplier to a public analyst. This enables the manager to see how his tests compare with those which are analytically done, and also gives the farmer a certain amount of confidence in everything that is carried out at the Creamery, and if he at all disputes the tests made in the dairy the analytical test can be produced to confirm those registered in the books of the Creamery.

This system of payment according to quality acts as an inducement to feed and winter cattle properly, and to keep young cows always in stock, weeding out the old ones which are giving poor milk. It also ensures honest dealing on the part of the supplier, who gains nothing by tampering with the milk, whereas when paid at a uniform rate irrespective of the butter value of the milk it affords an opportunity for unfair practices. The most accurate machines that have yet been discovered for ascertaining the quantity of butter fat in each supplier's milk are the "Babcock," "Loeffman Beam," or "Gerber" testing machines, and each have been found to compare favourably with the tests of the analyst and give general satisfaction.

The annexed report on milk testing will explain the process exactly.

MILK TESTING.

DIFFERENT TESTING MACHINES.

1. Milk is generally tested by either the "Babcock," "Leoffman Beam," or "Gerber" tester machines. The principles of all are nearly the same, and all do their work well. The machine I prefer (but this is only a matter of taste) is the "Babcock."

COMPOSITION OF MILK.

2. Before describing the methods of testing it may be as well to say that milk is a compound of fat, sugar, water, and casein, but, like the ore from which gold is extracted, only a small part of this compound—viz., fat—is used in the manufacture of butter.

QUALITY OF MILK.

3. It is, therefore, obvious that this butter fat, or when melted butter oil, becomes an absolute measure of the value of milk for butter making, and that consequently the more butter fat there is in milk the more valuable it is, as it will produce more butter.

OLD AND NEW SYSTEM OF PAYMENT.

4. Prior to the general use of testing machines the system of payment gave the greatest cause for dissatisfaction. It is universally admitted that all milks are not equally rich, and, as each supplier got generally the same price per gallon, it was a great injustice to pay for milk producing only 2 per cent the same price as that producing 4 per cent of fat. Now you can, by means of the "Babcock," test each and every one according to the quality of the milk.

PRINCIPLE OF TEST.

5. The principle of the test is the disposal of the sugar and casein and the concentration of the fat globules.

METHOD OF TESTING.

6. The method is as follows : Well and thoroughly mix equal quantities (17·5 c.c.) of the milk to be tested and sulphuric acid of 1·831 to 1·834 specific gravity (it is very essential to have specific gravity of acid all right, but this can easily be arranged by means of an acidimeter). The mixing is done in the bottles supplied with the machine. The bottles are then placed in the tester and whirled for five minutes at a speed of 650 revolutions per minute. Then add water which has just ceased boiling to the mixture until you raise it to the seventh mark on the bottle, and then whirl again for two and a half minutes, when you will find that all the fat has risen to the top of the bottle and shows itself in beautiful clear oil. The bottles being graduated, you can easily read the amount of butter fat contained in the milk. When the acid and milk are first mixed an amount of heat is evolved, the acid, sugar, casein, and water chemically combine, and the fat is set free.

ADVANTAGE OF TESTING.

7. To show the great advantage of paying for milk according to quality, we shall say that we have treated three samples of milk as above. One gives 3 per cent butter fat, another 3·5 per cent butter

fat, and the third 4 per cent butter fat. The following table will give an idea of the quality of the milk, the number of gallons it takes to make 1lb. of butter, and the price that should be paid per gallon if the price was 112s. per cwt.:—

Test.	No. of galls. to 1lb. Butter.	No. of galls. to 1cwt. Butter.	Price. d.	At per cwt. s.
3·0	3	336	4·0	112
3·5	2¾	308	4·36	112
4·0	2½	280	4·8	112

You will, therefore, see that milk producing 3 per cent should only get 4d. per gallon, whilst 4¾d. would be at least the price which should be paid per gallon for milk producing 4 per cent butter fat.

The quality and richness of cream from a separator depends entirely upon the manner in which it is skimmed—*i.e.*, whether thick or thin. If you skim at 80 per cent, and this is recommended as the cleanest skimming, you make from 3½lb. to 4lb. of butter from a gallon of cream. You can, of course, skim thicker, and produce less cream, but a good deal richer.

You cannot, however, lay down a hard and fast rule as to the quality of cream, a great deal depending on the season of the year and the quality and feeding of the cattle.

When the milk supply of the Creamery has been accurately tested and each supplier's average of butter fats duly recorded, then the question of payment arises, and in considering this important matter the fact must never be overlooked that the price of butter regulates the price of milk, and from the enclosed table showing the value of milk containing different degrees of butter fat, calculated at different prices for butter, it will be seen at a glance the different value per gallon of milk based upon the prices obtainable for butter; thus, if the value of butter is 10d. per lb., and your milk contains three degrees of butter fat, your milk is value for 3½d. per gallon, whereas if it contains four degrees of butter fat it will be worth 4½d. per gallon.

Of course, the season of the year is accountable for a good deal of the variation in the standard of butter fat, the poorest results being obtained in the months of April, May, and June, and the best from September to November.

IRISH CREAMERIES.

BUTTER FAT: ITS VALUE AND EQUIVALENT IN MILK AND BUTTER.

No. of Example.	*The Dairy* publishes from Hoard's Dairyman.		Decimal Butter Values of 10¼lbs. (One Gallon) Milk, and at under-mentioned prices per lb. of Butter.							
	Analytical Fat per cent in Milk.	Lbs. of Milk to produce 1lb. of Butter.	9d.	10d.	11d.	1s.	1s. 1d.	1s. 2d.	1s. 3d.	1s. 4d.
			d.	d.	d.	d.	d.	d.	d.	d.
1	2·80	31·1	2·9	3·3	3·6	3·9	4·2	4·6	4·9	5·2
2	3·00	29·1	3·1	3·5	3·8	4·2	4·5	4·9	5·2	5·6
3	3·20	27·2	3·3	3·7	4·1	4·5	4·9	5·2	5·6	6·0
4	*3·40	25·5	3·6	4·0	4·4	*4·8	5·2	6·6	66·0	6·4
5	3·60	24·2	3·8	4·2	4·6	5·0	5·5	5·9	6·3	6·7
6	3·80	22·9	4·0	4·4	4·8	5·3	5·8	6·2	6·7	7·1
7	4·0	21·7	4·2	4·7	5·2	5·6	6·1	6·6	7·0	7·5
8	4·2	20·7	4·4	4·9	5·4	5·9	6·4	6·9	7·4	7·9
9	4·4	19·8	4·6	5·1	5·6	6·2	6·7	7·2	7·7	8·2
10	4·6	18·9	4·8	5·3	5·9	6·5	7·0	7·5	8·1	8·6
11	4·8	18·1	5·0	5·6	6·2	6·7	7·3	7·9	8·4	9·0
12	5·0	17·4	5·3	5·8	6·4	7·0	7·6	8·2	8·8	9·4
13	5·2	16·7	5·5	6·1	6·7	7·3	7·9	8·5	9·0	9·8
14	5·4	16·1	5·7	6·3	7·0	7·6	8·4	8·9	9·5	10·0
15	5·6	15·5	5·9	6·6	7·2	7·9	8·5	9·2	9·9	10·5
16	5·8	15·0	6·1	6·8	7·5	8·2	8·8	9·5	10·2	10·9
17	6·0	14·5	6·3	7·0	7·7	8·4	9·1	9·8	10·6	11·3
18	6·2	14·0	6·5	7·3	8·0	8·7	9·5	10·2	10·9	11·7
19	6·4	13·6	6·7	7·5	8·2	9·0	9·7	10·5	11·1	12·0
20	6·6	13·2	6·9	7·7	8·5	9·3	10·0	10·8	11·6	12·4
21	6·8	12·8	7·2	8·0	8·9	9·6	10·4	11·2	12·0	12·8
22	7·0	12·4	7·4	8·2	9·0	9·9	10·7	11·5	12·3	13·2

All these values are in pence, and decimals of a penny to the first place. The true value in each case would be slightly greater than those given, as the decimal points do not terminate, but the difference is exceedingly minute.

EXAMPLE.—Milk of short-horned cows contains on an average *3·40 (Ex. No. 4) of fat by analysis; therefore, when butter is only worth 1s. per lb., such milk is only worth *4·80 (say 4¾d.) the gallon of 10¼lbs. for butter purposes.

IRISH CREAMERIES.

Having dealt with the establishment of Creameries, I now wish to say a few words on the errors which have cropped up in them when established, and hope that my remarks on this point may be the means of helping those connected with dairies of this description to avoid the errors which I shall briefly allude to.

1. The greatest error which can occur in the working of a Creamery is to have an inefficient water supply, for without a good supply of pure spring water it is impossible to make a fine quality of butter. It is an error which occurs rather frequently in Creameries, otherwise we should not hear so much of the difficulties of cooling cream in summer, nor would the market in close, muggy weather be flooded with over-held and bad flavoured butter.

2. Another error occurring in connection with Creameries is defective drainage. Many Creameries are built too low, and it is difficult to get the drainage from the churns, &c., to run off freely. The purification of dairy sewage is too wide a subject for this article, but something can at least be done to prevent an unpleasant odour in the immediate neighbourhood of the Creamery itself. The surface of the ground around the Creamery should be kept as clean as possible, and all drains should be open and concreted, and must be inspected frequently and regularly. The road leading along that side of the Creamery where the milk is taken in, and where the separated milk is given out, should be closely paved or concreted.

3. Another error noticed occasionally in Creameries is the want of adequate provisions for ventilation, especially in buildings which have been adapted to suit the purposes of a Creamery. Too many Creameries depend for their ventilation on the doors and windows, and have practically no air currents through the roof; the remedy is obvious and easily applied.

4. Some of the principal errors in a Creamery occur in connection with the treatment of the cream. In most dairies soured cream is churned, and the cream is usually allowed to ripen in swartz cans placed in a cooling tank. No particular method is employed to determine the proper ripeness of the cream; in fact, the aroma and taste are almost entirely relied upon to tell that the cream is fit for churning. There is no skill required to determine the acidity of the cream, and it has been proved beyond doubt that when cream has developed the equivalent of $\frac{3}{4}$ per cent of lactic acid it is fully ripened, and any further development of acid results in the production of butter which will rapidly become bad flavoured.

5. The errors in salting and working butter are not so common as they used to be, though one occasionally finds in a Creamery a butter worker which cannot be instantly thrown out of gear. Streakiness in butter is becoming almost uncommon; but one frequently meets with butter which has been overworked in the

endeavour to press out the water and incorporate the salt. It is not possible to add water to butter unless the water be at a temperature considerably above 70° Fahr.; but by careless working the butter can be made so soft that the worker cannot press the water out of it. A little care and foresight can obviate this. When the butter is taken out of the churn in granular condition, it should be spread evenly on the butter worker and carefully salted, turning over the butter with a pair of Scotch hands; then set the worker in motion, giving two or three turns, and remove the butter to a slated slab, where it should be allowed to stand and drain for two hours at least, after which it can be re-worked.

6. The errors in the making up of butter are still noticeable, in spite of the frequent warnings and advice upon this matter. Rarely a day passes but what one hears of pyramid boxes coming to grief and the butter oozing out from the broken sides; and still more frequently the vegetable parchment employed to line the box is used in too niggardly a manner, at the risk of the butter being soiled by dust and dirt before it reaches its destination.

7. There are one or two points in connection with the treatment of the milk which require notice. In winter it is necessary to warm the milk, and few Creameries are properly equipped for doing this. Many are provided only with a long steam-jacketed trough, which is the worst possible arrangement for heating the milk, inasmuch as it is fixed behind the separator, and it is extremely difficult for the man in charge of the separators to keep the milk circulating freely in all parts of the trough whilst the separators are running. Some Creameries are without heaters of any kind, and heat the milk by blowing a jet of steam into the tank. The separated milk thus becomes adulterated with water, and in most cases the quality of the milk is affected by the water from the condensing steam not being pure.

8. Far too little attention is given to testing the separators in Creameries. They often run far beyond their capacity. My own experience teaches me that no separator will skim clean at its advertised rate if the temperature of the milk is below 85°, and the rate must be reduced as the temperature is lowered. Careful attention to separators will be amply repaid, because a difference of $\frac{1}{10}$th per cent of fat in the separated milk would mean £20 per month to a fair-sized Creamery. The only way of accurately finding the residual fat in separated milk is by gravimetric analysis. The centrifugal machine or milk tester, in spite of assertions to the contrary, is absolutely useless for determining the fat in separated milk. In all matters relating to Creameries it should be borne in mind that it was not by mere superiority that the foreigner successfully seized our markets; it was by *uniform* superiority. They, after a successful

and highly scientific study of the matter, arrived at the conclusion that, to produce an uniformly high-class butter, the system of production must be carried on uniformly from beginning to end. Housing and feeding of cattle, attention to purity and cleanliness of milk, systematic extraction of cream at a given temperature, perfect ripening of cream, systematic churning, working, and packing; all the minute details attendant upon each of these operations must be adopted, and carried out in a perfectly uniform and systematic manner, before we can ever hope to command our own markets again—most certainly before we can ever hope to make winter dairying a success. Unfortunately, in this country it is no new thing, on visiting various Creameries, to find some without any cream-cooling arrangements in the height of summer, and others with no milk-heating arrangements for the depth of winter. A great annual battle is being fought to put Irish butter on the markets in the spring time only to take it off again in the winter, inviting with open arms our own destruction. It is surely easier to work on a regular and uniform system satisfactorily, than on an irregular one with all its attendant losses and disappointments. There is no mystery whatever about butter making. The operation must be carried on under known conditions and on given lines. Neglect of these will result in anything from poor quality down to really bad, unwholesome butter.

In concluding my remarks upon this part of my paper I would wish to urge upon everyone connected with Creameries that, to properly find out the errors in the working of the system, each day's work should be tabulated with the strictest accuracy, especially with regard to temperatures of milk, temperatures and acidity of cream, amount of produce and quality of same. There is no special trouble in it, and if each day's work was compared with the previous one little matters showing where improvements may be made will be continually presenting themselves. Under such a system the working of a dairy will rapidly become interesting and instructive; the enervating, dull monotony will just as rapidly disappear. Instead of some of our Creameries being mere blots on the trade of the country, as some unfortunately still are, they will represent a clean and busy industry, and be of incalculable value. We must either attain, by forging ahead of all competitors, that pre-eminence which Irish butter once held, or miserably struggle on to its complete annihilation as a paying industry.

I will now deal briefly with the establishment of Creameries in Ireland by the Co-operative Wholesale Society Limited, and the cause of their taking this action. Their representative at Limerick has been intimately associated with the Creamery movement from its inception and has travelled all over the country with the object of organising and inducing the farmers in some districts to carry out these ideas, and time after time, while attending these meetings, and when failure has been the result, he has been waited upon by the general body of the farmers asking if the big society which he represented would not do something to help them. At first there was no encouragement given to their repeated appeals, simply because it was thought that the precedent might be a bad one, and that farmers relieved of their own responsibilities might gladly welcome anyone who would come and put up a Creamery in their midst and then support it or not just as they pleased.

The first move the Co-operative Wholesale Society made in connection with the working of Irish Creameries was in January, 1894, when a request from the Committee of the Castlemahon Co-operative Dairy that their Society should take over at an annual rent this Creamery was brought under their consideration. This was one of the Creameries alluded to in the earlier part of this article that had got into difficulties through petty jealousies and party differences, in consequence of which the milk supply fell away; the Creamery got into financial difficulties, and was actually on the brink of ruin. All these representations were made to the "Wholesale," and it was pointed out to them that if they consented to rent this Creamery for twelve months it was the opinion of the Committee that after a year's working by an outsider all their differences would have disappeared and they would be able to start again as a united Co-operative Dairy Society. It might also be mentioned here that the representative of the "Wholesale," acting upon their instructions and with their approval, attended several meetings of this Creamery with the object, if possible, of smoothing over the difficulties that had arisen, but, unfortunately, without any success. Finally matters were arranged, and the Co-operative Wholesale Society rented this Creamery for one year at £100. It was opened by their representative on the 26th February, 1894, the following circular having been distributed amongst farmers of the district previous to the date of opening:—

Castlemahon Co-operative Dairy Society Limited.

The above Society having made arrangements with the Co-operative Wholesale Society of Manchester, through their agent, Mr. W. L. Stokes, of Limerick, to hand over to them for twelve months the Creamery situated at Castlemahon, and as Mr. Stokes hopes to be in a position to start work on Monday next, 26th inst., he appeals to all the farmers in the district to give him that support which such an establishment fully merits; and he trusts by treating all who avail themselves of the advantages of supplying milk to this Creamery in the fairest possible manner, and by making weekly payments, and more frequently if desired, to accommodate and convenience every supplier of milk.

(Signed) W. L. STOKES,
Co-operative Wholesale Society.

At first the support accorded was not very encouraging, but in a very short period, when the farmers saw the manner in which business was conducted, confidence was established and the milk supply rapidly increased. Parties who would not think of sending milk to this Creamery while it was worked as a co-operative concern now gladly availed themselves of the opportunity, and within one month the milk supply increased from 200 gallons daily to over 1,000, and during the season exceeded 2,000 gallons daily. The system introduced of paying for all milk at the end of every fortnight met with the hearty approval of all suppliers, as previously the system adopted here and elsewhere had been monthly payments, which often extended to five or six weeks; the system also of paying for all milk supplied according to quality had a most salutary effect, and during this year the Creamery was looked upon as a regular boon to the district.

As the term of tenancy was drawing to a close the Committee again approached the Wholesale, and told them that there was no hope of being able to carry on the concern again as a Co-operative Creamery, as the breach between the different parties had widened during the year and it was useless to make the effort, and at the close of 1894 the Dairy Society wrote as follows: "Our Committee are inquiring every day whether I have heard anything with reference to the proposal to sell or let the Creamery. Our creditors are beginning to press for payment, so we must get money without delay." And then added, "In fact, the Committee are so grateful for your coming to our rescue last March that it would be very easy for you to settle with them; but, of course, if your Society do not wish to buy now, or take it for a term of years, we shall be compelled to arrange with some others immediately."

At length negotiations were entered into, and after some time it was agreed that the Wholesale Society should become purchasers for a sum of £850, which would about cover the liabilities of the Committee, and since the Creamery has come into their possession it has been making rapid strides forward. During their first year of tenancy the milk supply increased so rapidly that a third separator had to be put up, and again last year they found that three separators were not adequate for their requirements, and were compelled to erect a fourth. This Creamery, during the season, dealt with between three and four thousand gallons of milk daily, which should be conclusive proof of the favour in which it is held and the manner in which the action of the Wholesale Society has been appreciated.

During all this period requisitions signed by the farmers of various districts had been sent direct to the Committee at Manchester, and also to their representative at Limerick, praying that they would help them by erecting a Creamery in their district, and in most cases fully explaining their inability from one cause or another to combine. These requisitions became so numerous, and the disadvantages the farmers of some districts were placed in became so apparent, that the Wholesale took the matter into serious consideration, and at length came to the conclusion that they would materially benefit the farmers of Ireland by expending some of their capital in putting up Creameries in some of the districts where co-operation had failed or would not be attempted, and from the very first discouraged the idea of ever attempting to go into any district where they considered there was the most remote chance of the farmers co-operating and erecting their own Creameries.

Various deputations from the Wholesale Society visited Ireland and met large bodies of farmers, who explained fully their position and the difficulties in their way, and so convinced were these representatives of the benefits which they would confer on the farming community that their representations were the means of inducing the General Committee to pass a resolution that twelve Creameries be erected in suitable districts in Ireland, and when the selection of these sites was under consideration it would be difficult to adequately describe the anxiety evinced by the farming class generally that their district should be included in the selection. This action of the Wholesale Society has been thoroughly appreciated, and since their establishment several existing defects have disappeared, Creameries generally are conducted on a more sound basis, and the result generally has been of incalculable benefit to the farming community.

The Wholesale also decided that in the erection of those Creameries no expense should be spared, and that, so far as practicable, they should be models in every respect of the word, and the following description may not be out of place:—

The length of the building is 120 feet, the middle portion of which is taken up by the dairy, which is 60 feet long by 24 feet wide; at either end of the dairy is a concreted passage through which the cars pass for the delivery of milk; outside these passages at one end is the engine house, and at the other end offices, store-room, &c., so that the structural arrangements, as will be seen by a glance at the plans reproduced herewith, are the result of careful study and long acquaintance with the essential particulars relating to Creamery and Dairy work, hence there has been a complete departure from the hackneyed arrangements hitherto adopted in erections of this description throughout the country, and we are naturally proud of our buildings, located as they are, in all cases, in the best dairy districts, and being remarkable for healthy situation, thorough ventilation, cool atmosphere, effective sewerage, dry floors, ample space, easy of approach, central for suppliers, abundance of cold spring water, imposing structures, and workmanship difficult to equal.

At the same time as the buildings were being planned the machinery was considered, with the result that even to the bolt and nut was reckoned, and the position located that every item would occupy when everything was erected and in place. With such accuracy was this done that not a hitch occurred from the beginning to the present that occasioned the slightest delay to the builders or the mechanical engineers.

The power room is located at one end—a commendable arrangement, as the heat and vapour is carried through the ventilator in the roof, and the receiving passage, with its large open doors, being placed between the power room and the dairy, there is no possible chance of any injury to the pure air passing through the dairy.

The engine is a beautiful specimen of workmanship. It is fitted with a sensitive high-speed governor and all the recent improvements. The boiler is of the vertical cross tube pattern.

The shafting is of turned and polished steel throughout, and supported on ornamental brackets, having extra long gun-metal pedestals and journals.

The couplings are massive specimens, turned, bored, keyed, bolted, and polished, and the pulleys all of wrought iron.

The belting is of best quality English oak tanned.

The water and steam tubing by Lloyd and Lloyd, the well-known tube manufacturers.

The churns and butter worker by Llewellin and Son.

The separators are of the well-known type of Alexandra and De Laval.

The refrigerators and heaters—Danish manufacture.

In fact, special care has been taken to provide that every item, wherever possible, should be of British manufacture.

The *modus operandi* may be briefly described as follows :—

The milk is received from the suppliers' tinned steel churns and delivered on to a spring balance weighing machine, where the weight and quantity is registered in imperial gallons and entered at the time in the books provided by the Society for the suppliers.

The milk is then elevated into a larger cistern, whence it flows by gravitation on to a new and beautiful description of circular milk heater, known as Petersen's New Pasteuriser. The milk is here treated to a very high temperature, sufficient to kill the germs of bacteria, and it is thence passed on to the tinned steel auxiliary heater before entering the separators. The skim milk as it is received from these machines is elevated into cisterns at the far end of the building, whence it is delivered into the suppliers' churns within an incredibly short time after the delivery of the whole milk (as loss of time is reckoned loss of money). The cream as it is delivered from the separator passes over a tinned copper refrigerator, where it is thoroughly chilled and then delivered into deep setting swartz cans, where it is immersed in the coldest of spring water preparatory to placing in ripening cans previous to churning.

The churning is a very important duty, and none but the charge hand dairymaid is allowed to interfere during the process; as the barrels are fitted with all the latest appliances, such as eyeglasses, ventilators, stop devices, &c., the dairymaid has no difficulty in ascertaining the necessary moment to stop churning, and the butter at this stage presents the appearance of finely-broken peas. By an ingenious device the buttermilk is then drawn off, and some of the purest cold spring water is introduced for the purpose of washing, which is continued until the water passes through without colour; this washing in the churn does not destroy the delicious aroma of the butter.

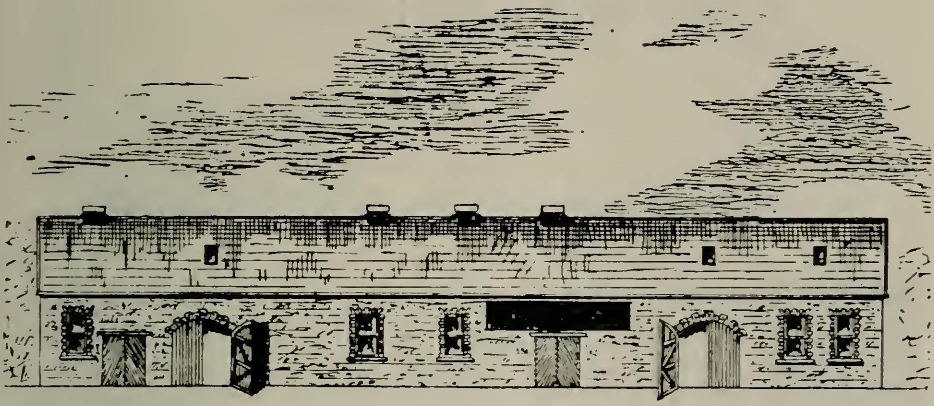
The butter is then removed to beautiful enamelled earthenware troughs, where it is allowed to drain off preparatory to placing on the rotary butter workers, where the salt is applied and incorporated in the proportions found most suitable to the demand, and which is generally about 3 per cent.

METHOD OF DETERMINING THE ACIDITY OF CREAM.

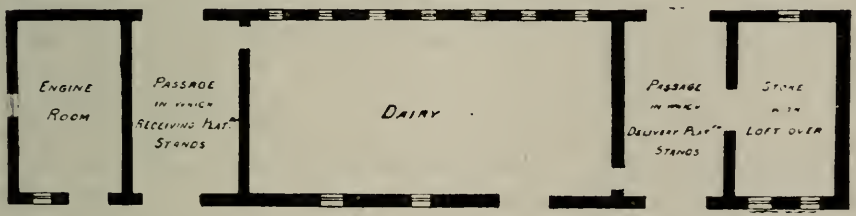
The apparatus for determining the acidity of cream is not costly, nor is the method difficult to work. The principal difficulty is to obtain a solution of caustic soda of proper strength and to keep it of the proper strength whilst in use. This solution alters rapidly in strength by exposure to the air. This can be prevented by pouring a few drops of paraffin oil on the surface of the caustic soda and drawing off the solution as required by means of a syphon. The apparatus required consists of—A burette graduated in tenths of a centimeter, a burette stand, a porcelain basin of about 3in. diameter, a glass stirring rod, a small 10 c.c. measuring cylinder for measuring the cream, a bottle of standard solution of caustic soda of such strength that 1 c.c. will neutralise 0·01 grain of lactic or its equivalent, a bottle of Phenolphthalëin Indicator, made by dissolving $\frac{1}{8}$oz. of phenolphthalëin in 4oz. of methylated spirit.

To find the acidity of a sample of cream 10 c.c. are measured with the measuring cylinder and transferred to the porcelain basin, the cream which sticks to the sides of the basin being washed into the basin with the aid of a little cold water. One drop of the phenolphthalëin indicator is then added, and the caustic soda solution is added drop by drop from the burette until the colour produced in the cream no longer disappears on stirring. The amount of caustic soda added is noted from the graduations on the burette, and if 10 c.c. of the cream have been used each c.c. will represent 0·01 per cent of lactic acid in the cream. Thus if 7·5 c.c. of caustic soda has been added to 10 c.c. of cream before a permanent pink colour is produced, this will mean that the cream will contain 0·75 per cent of lactic acid, and that the cream is fully ripe for churning.

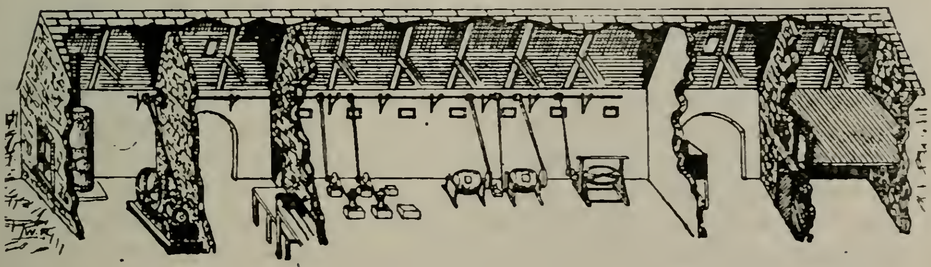
IRISH CREAMERIES.



FRONT ELEVATION.


Engine Room
Passage in which Receiving Platᵐ Stands
Dairy
Passage in which Delivery Platᵐ Stands
Store with Loft over

GROUND PLAN.



LONGITUDINAL SECTION.

PLAN OF CREAMERY.

Coal and Coal-Mining.

"Je sais comment la houille en or se convertit."—PONSARD.

BY D. M. STEVENSON AND W. E. GARRETT FISHER, M.A.

BRITAIN has been in turn a great corn-growing, wool-growing, and coal-producing island. In these words Dr. Cunningham reminds us that our country is now in the third of the great stages of industrial development. After passing through the agricultural and pastoral stages, it has advanced to the manufacturing stage, with the usual result of a vast increase in material welfare, coupled with an alleged decline in real wealth. It is not our business here to consider the latter part of the question; it is for others to say whether the standard of manhood and citizenship has advanced or retrograded since the spacious days of great Elizabeth. Accepting the material advance as an indubitable fact, we cannot fail to see that it is due, first and foremost, to the exploitation of the vast stores of coal with which a beneficent geological fairy once endowed our island, and which, in the course of the last two centuries, we have been slowly learning to use. Consequently, it is worth everyone's while to understand just what coal is, how it has come into our service, and what it does for us. To explain that is the purpose of the following article.

Everybody in our uncertain climate knows roughly what coal is; but it is safe to assert that not many would find it easy to put their knowledge into a full and accurate definition. Like justice, which the philosopher said that every man understood but no man could define, coal defies the efforts of the lexicographer. A striking instance of this was presented in the famous law-suit about Torbanehill mineral, argued before the Court of Session in 1853. For nearly a week theoretical chemists and geologists, practical miners and engineers, delivered their expert views as to what was and what was not coal. Finally the Lord Justice-General observed, in his charge to the jury, that to find a scientific definition of coal after what had been brought to light within the last five days was out of the question. It might be prudent to imitate the great lawyer's wise modesty, and to be content with the common knowledge of coal as "an amorphous substance of variable composition."

Perhaps as good a definition as any is that of the earliest encyclopædist, Ephraim Chambers, who called it "a black sulphureous inflammable matter, dug out of the earth; serving in many countries as the common fuel." Coal is not always black, and it is, happily, often free from sulphur; but, with the omission of those adjectives, coal can be described with some accuracy and completeness as an inflammable solid dug out of the earth, and commonly used for fuel.

Although coal cannot be defined, it can be classified. Several methods of classification are adopted, and the classes are many and various. Coals may be classified according to their chemical composition, their behaviour when heated, their calorific powers, &c. But the most scientific classification regards coal as part of a series in which wood is the first term and graphite the last, and in which the proportion of carbon steadily increases as we ascend the scale. It is in this direction that the actual alteration of wood into coal has proceeded. Thus we have

(1) wood;
(2) peat;
(3) lignite or brown coal;
Tasmanian white coal, &c.;
(4) bituminous coal, caking or non-caking;
cannel coal;
jet;
(5) anthracite;
(6) graphite, or pure carbon.

Anthracite may be regarded as bituminous coal which has been deprived of still more of its hydrogen and oxygen by the agency of heat and pressure. Jet and cannel coal are harder and more resinous varieties of bituminous coal, which may be taken as the average type. Peat and lignite are stages on the way to its formation.

As to the value and importance of coal to the world at large, and notably to us in Great Britain, everyone is more or less convinced. To that product of Mother Earth are chiefly due all the triumphs of material civilisation that the last century has beheld, which so truly distinguish the present age from any that has gone before it. The late Professor Jevons, in his interesting and almost epoch-making work on "The Coal Question," has put this so forcibly that no apology is needed for a lengthy quotation:—

> Day by day it becomes more evident that the coal we happily possess in excellent quality and abundance is the mainspring of modern material civilisation. As the source of fire, it is the source at once of mechanical motion and of chemical change. Accordingly it is the chief agent in almost every improvement or discovery in the arts which the present age brings forth. It is to us indispensable for domestic purposes, and it has of late years been found

> to yield a series of organic substances which puzzle us by their complexity, please us by their beautiful colours, and serve us by their various utility. And as the source especially of steam and iron, coal is all powerful. This age has been called the Iron Age, and it is true that iron is the material of most great novelties. By its strength, endurance, and wide range of qualities, this metal is fitted to be the fulcrum and lever of great works, while steam is the motive power. But coal alone can command in sufficient abundance either the iron or the steam; and coal, therefore, commands this age—the Age of Coal. Coal, in truth, stands not beside but entirely above all other commodities. It is the material energy of the country—the universal aid—the factor in everything we do. With coal almost any feat is possible or easy; without it, we are thrown back into the laborious poverty of early times.

In this magnificent eulogy of coal there is not a word that is extravagant or excessive. It must be borne in mind, of course, that the writer's mind is bent solely upon material things. The essential nature of man and the main facts of human life have not noticeably progressed beyond the times of Pericles or Raleigh; or if they have, it is not coal that has achieved the miracle. Many thinkers, of whom Mr. Ruskin is a notable example, are of opinion that coal has brought us harm rather than good in what is non-material; they accuse us of softening our national fibre in our blast furnaces, and of burying our national conscience in the heaps of waste and cinders that surround our coal pits. Perhaps there is some colour for an accusation which most of those who are interested in our coal will treat with contumely; but it would be out of place to discuss it here, where our business is to consider coal in itself rather than in in its effects and influence upon modern life. At the same time it is well not to forget that there is always the possibility of a negative answer to Mrs. Browning's question—

> When we drive out, from the cloud of steam, majestical white horses,
> Are we greater than the first men, who led black ones by the mane?

But, after all, the question is rather one of morals than of economics, and our concern at present is with the latter.

If we cannot give a strict scientific definition of coal, we can at least say with almost absolute certainty how it originated. The earlier users of it had no conception of the real facts about this—to their unphilosophical minds coal was a mineral, like any other stone, with the important difference that it would burn. The early writer upon coal, up to well-nigh the close of the eighteenth century, invariably describes it in words that show that he has no idea of its real vegetable origin. Thus Marco Polo, in his "Travels," says:—

> Throughout the province of Cathay is found a sort of black stone, which they dig out of the mountains, where it runs in veins; when lighted, it burns like charcoal, and retains the fire much better than wood, insomuch that it may be preserved during the night, and in the morning still be found burning.

Æneas Sylvius, too, travelling in Scotland in the fifteenth century, had his first introduction to coal when he saw the beggars waiting at the church doors to receive "black stones" in the place of bread, and going away joyfully with their strange burden. His amazement was lessened when he found that these stones could be burnt instead of wood, which was beginning to be an expensive commodity in Scotland. One of the names given to coal in its early days, to distinguish it from charcoal, was "stone-coal," which still survives in the German "stein-kohle." Even now it is by no means certain that the schoolmaster is sufficiently abroad for every one to know that coal is no more a mineral than mustard. As Professor T. E. Thorpe puts it:—

> Three generations have elapsed since Erasmus Darwin maintained that coal was formed out of ancient morasses and forests, but what proportion of those who use coal in these latter days know anything of the mystery of its origin? If the knowledge of these things is in future to spread at no greater rate than this, it is to be feared that our coal will be at an end before our people have learned to know what it actually is, how it has been formed, and what it can do.

Coal, then, is a direct result of the heat and light and chemical energy which have come to us from the sun. It is derived from vegetable matter, chiefly woody fibre, which has been long buried and so undergone certain chemical changes akin to those artificially produced in the charcoal-burner's heap or the retort of the gasworks. Wood consists in the main of carbon, oxygen, and hydrogen. The charcoal-burner exposes it to a process of slow and imperfect combustion, which removes the oxygen and hydrogen, and leaves only more or less pure carbon, such as the world has known for at least twenty centuries under the names of charcoal or *carbo*. Experiments have shown that when wood is submerged under water at a moderate temperature an exactly similar process takes place. The oxygen dissolved in the water slowly acts upon the wood, forming carbonic acid gas (CO_2), marsh gas (CH_4), and water (H_2O.)*

This process extracts the oxygen and hydrogen from the wood at a greater rate than the carbon; consequently the proportion of the latter steadily tends to increase, and may rise from 50 per cent in wood to 90 or even more per cent in anthracite. The resultant product may be peat, lignite, bituminous coal, or anthracite, according to the completeness with which the carbon has been freed from its combined gases and to the subsidiary conditions of the experiment. As to the details of the process in nature there is still some diversity of opinion, but that our coal was formed in such a fashion no reasonable being can any longer entertain the slightest doubt. It will be worth while to give a brief sketch of the circumstances which attended the formation of the British coal deposits.

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* A similar reaction produces the bubbles of gas which rise to the surface when the vegetable mud at the bottom of a country ditch is disturbed.

As in the fairy stories, the best chronology that we can furnish is that of "once upon a time." Several geological ages had then already passed since the world was a fluid haze of light. The nebulous vapour had condensed into a sphere and cooled sufficiently to develop a solid skin, composed of Archæan rocks, the granites, schists, gneisses which here and there rise to the surface in mountain-chains like the Grampians. Their arid wastes had been chiselled into hills and dales and worn into a sandy soil by the torrents and tornadoes which raged over the earth in the midst of the earthquakes and volcanoes that marked the struggles of the newly-imprisoned central fire. The Cambrian and Silurian periods saw the mysterious arrival of life upon the earth, and then we have a glimpse of the British Islands as partially covered with a series of great lakes, in which the Old Red Sandstone was deposited.

The volcanic forces were still strong, and in time the whole arrangement of land and water was altered again into a new sea which covered most of Ireland, South Wales, all England north of Staffordshire, and a broad belt of Scotland between the Forth and the Clyde. In this sea were laid down the beds of limestone now known as carboniferous, on account of what immediately followed. The land then began to rise again, and the sea shrank away accordingly. The climate was warm, if not tropical. The rising land, as it emerged from the sea, was covered with a rich slime, full of limestone dust and organic remains, in which a prolific vegetation speedily took root and flourished. This vegetation consisted in great part of gigantic representatives of small modern species. Great club-mosses and towering horse-tails held the pride of place which is nowadays granted to the oak and the chestnut. The rise of the land soon came to a standstill, and then was replaced by a series of up-and-down movements or oscillations, which alternately raised it above the water level for a few scores of years or centuries, and then submerged it again.

The appearance of the country at that time, as Professor Green has pointed out, must have been more like that of the Dismal Swamp than of any other part of the modern world. Lyell describes this great morass as having the appearance of a broad inundated river-plain, covered with all kinds of aquatic trees and shrubs, the soil being as black as in a peat-bog. It is one enormous quagmire, soft and muddy except where the surface is rendered partially firm by a covering of vegetables and their matted roots. In much the same circumstances was formed the coal that we are burning to-day. Generation after generation of club-mosses showered down their inflammable, highly resinous spores—with which stage lightning is now made—to accumulate in even layers on the soil; generation after generation of giant horse-tails, of Lepidendra and Sigillariæ, crashed down themselves in the plashy soil to rot and leave their bark as a contribution to the industry and warmth of future ages. This went on for periods of varying length, until the vegetable layer was sometimes one foot, sometimes fifty feet, in thickness. Then the sea encroached again, helped it to carbonise, and covered it up for a long time. When the waves retired the vegetable layer was sealed from the air with a covering of shale or sand. Then a new forest arose and a new vegetable layer was deposited, to be in its turn carbonised and covered away safely. So the process went on, until the total thickness of the layers thus accumulated amounted to several thousands of feet, of which a fair proportion was well on the way to become more or less excellent coal.

Not long ago it would have been asked scornfully how one could know all this, but the "geological record" is so well understood nowadays that it is hardly necessary to explain that the coal-measures bear their story legibly inscribed in their substance.

> It is impossible (said Sir Andrew Ramsay) to have an intimate knowledge of the carboniferous rocks, even within the limited area of the British Islands, without coming to the conclusion that the various strata were formed in seas, some comparatively open and deep, some shallow, estuarine, and restricted in area, and some in fresh water; and that beds of coal were due chiefly to terrestrial vegetable growths that flourished and died on the land, and were buried with the soils on which they grew. Rain-pittings on the shales are not infrequent, together with sun-cracks and footprints of Labyrinthodont Amphibia. The rain-pittings in this case tell of showers falling on surfaces of moist mud, exposed by the temporary retirement of fresh water, and the sun-cracks indicate the drying and shrinking of that mud; and these joined with the footsteps of Amphibia tell of daily events which by happy accidents got perpetuated, first, by baking in the sun's rays. Next, when the area was again overflowed, new layers of mud settled on these impressions, and afterwards became consolidated into chalk; and thus we have, in a measure, fossilised sunshine, showers, and footsteps of old Amphibians.

The first assurance of the real nature of our "fossil fuel" was received when Sir William Logan announced his observation that a seam of coal was invariably found resting upon a peculiar bed of unstratified "under-clay," and suggested that this might have been the soil in which grew the trees whose trunks had already been found here and there standing in the coal seams. As the working of mines became more scientific in method, further observations of the same kind were accumulated. Curious fossils found in the under-clay, and known as Stigmariæ, were proved by Mr. Binney to be the roots of the Sigillariæ, which had been already recognised as fossil tree-trunks in the coal seams. Microscopic examination bore out the idea thus suggested. Professor Huxley arrived at the somewhat astonishing and long disputed, but now generally accepted, conclusion that much of our best British coal is made up of the minute spores once shed in countless myriads by the Lepidodendron, or "Scaly tree," of the old carboniferous forests, a plant closely related to the modern club-moss or Lycopodium, but then growing to the size of the modern forest-tree. It appears at first sight difficult to imagine that seams of coal many feet in thickness and many square miles in extent can be derived from such tiny atoms as the spores of the club-moss. But the fact is incontrovertible. In Tasmania great deposits of "white coal" are found, a substance looking like oat-cake, which is obviously a mass of similar hardened and compacted spores, and burns with the bright flame of highly bituminous coal. In 1858 a shower of the pollen of the fir fell in the county of Inverness which covered the ground for many miles to a depth of half-an-inch, and it is easy to see that similar falls repeated year by year and undisturbed, as they must have been in the forests of the carboniferous period, might ultimately produce a coal seam of any known thickness.

Other coal, again, like the average "caking-coal" of Scotland, shows itself to be derived from the slow carbonisation of the bark of the same tree and of its relative the Sigillaria, or of the Calamite, the great-great-grandparent of the little horse-tails which are to be seen waving in the breeze beside so many of our ponds and canals. Thus the club-moss and the horse-tail, humble weeds as they now seem, really deserve to replace the rose and the thistle as the national emblems of England and Scotland; for it is to their ancestors, who painfully stored up the energy of the sun for uncounted ages to give it forth to us to-day, that Great Britain chiefly owes her pride of place among the princes of modern industry.

Acting on data of this kind, geologists have arrived at some exactitude in telling the whole story of the world's deposits of coal. One or two points are still in dispute, as, for instance, whether the coal was all formed on the very spot where it is deposited, or whether, like the sandstone and grits which neighbour it, it was carried away and laid down by the action of water. The weight of most of the evidence is in favour of the former view, but it seems quite possible that some basins of coal, especially of cannel, in which the remains of fish have often been found, may actually have been formed in the beds of ancient lakes by vegetation drifted down by the feeding rivers and gradually becoming water-logged and accumulating at the bottom of the lake. But by far the greater part of the coal comes from forests that grew and decayed in the very spot where it is now found, the under-clay being the veritable surface soil in which trees once stood.

Once this view of the nature of the formation of the coal measures is accepted, it shows us how countless a number of centuries must have elapsed since the carboniferous forests ceased to flourish. They date from the Primary or Palæozoic Age, and there is abundant evidence to show that they have since been covered by many thousands of feet of solid rock, accumulated perhaps no faster than a foot in a century. Our human measures of time are as powerless in the face of such facts as our measures of space when we apply them to the distance of the fixed stars. All we can say is that the coal was stored up in what Mr. Lang calls "the long, long agos."

The distribution of coal over the world is also a highly interesting question, but one that cannot be answered with much accuracy, because in many parts no inquiry has yet been made as to the presence or absence of coal. This is a matter that cannot be predicted, for the following reason. The carboniferous forests extended, as far as we know, over all parts of the globe, with the necessary exception of the parts then covered by the deep sea. If, therefore, we knew how land and sea were distributed in the Carboniferous Era, we should at once be able to say where coal exists and where it does not. But the shape and contour of sea and land have altered a thousand times since the coal seams were laid down. Like all other branches of geological science, this inquiry teaches us most emphatically, as the ancient philosopher and the modern poet have alike conceived, that

> The hills are shadows, and they flow
> From form to form, and nothing stands:
> They melt like mists, the solid lands:
> Like clouds they shape themselves and go.

Only actual observation can tell us where the forests once stood and where was the stillness of the central sea. The whole story is, with many gaps, indeed, but still legibly, graven upon the rocks. Thus we know that carboniferous forests formerly covered the whole surface of Great Britain from north of Edinburgh to south of the Wash, and from the hills at present constituting South Wales to lands across the Channel, a fissure not then produced. Much of Ireland, too, was covered with the coal forests, as well as much land that now lies under sea. No country of any importance is known to be wholly devoid of coal deposits.

The duration of these forests must have been great, for near Edinburgh there is a ten-foot seam of coal; near Ashby-de-la-Zouch is a twelve-foot seam; at Dudley there is, or rather was, one thirty-six feet thick; in Poland is another forty-eight feet thick.

In India even 200 feet are said to be found in a single seam. And each of these seams only represents the life of one forest, which was often killed by the advance of the sea, and replaced by a new one on the same spot when the water, centuries later, withdrew. As many as forty-two seams are known to occur in the coal measures, each more than a foot thick, testifying to as many disappearances and recurrences of the forests. The whole thickness of coal, under-clay, shale, and sand, amounts in South Wales to as much as 10,000 feet, and, it may once have been much greater.

For we do not possess all, nor even the greater part of the coal which was once stored up. Otherwise, instead of bearing isolated coal-fields, the whole North of England and South of Scotland would be one vast Black Country. The process of denudation by wind and water, which has carved out the Highland hills and fixed the features of our country, has also played havoc with much of the coal, which has been steadily worn away and dispersed in irrecoverable dust, or decomposed to form new plants. But it would be ungracious to complain of this loss, because, if it were not for the process of denudation, nothing is more certain than that all the coal would be buried miles below the surface of the ground, and utterly out of our reach. The wind and the rain have been our helpful predecessors in coal-mining, and to accuse them of wastefulness in the work of "winning" the coal would be the merest ingratitude.

The table on pages 460 and 461 shows the relative production of coal in the countries of the world. In a few cases the area of the coal-fields has been added, but these figures are at the best vague and misleading, since hardly any country but our own has made a careful survey of its coal-producing areas, and even that cannot profess to include all the hidden coal. The figures of annual production of the United Kingdom are chiefly taken from the Blue Books of the Board of Trade; most of those relating to the colonies and to foreign countries have been obtained from the respective governments specially for this article, and many of them are now published for the first time.

It will be seen that we can no longer boast, as Taine once said of us, that "England produces twice as much coal as the rest of the world," but the United Kingdom still leads the way, and produces more coal than all the rest of Europe together.

The geological history of coal, as we have seen, is thus to be read in the seams themselves. The industrial history depends upon purely human records, which have fortunately been kept with sufficient accuracy to enable the tale to be told as follows. The coal lay long idle; indeed, Huxley has drawn from this a pretty lesson of the slow but unwasteful processes of nature.

COAL AND COAL-MINING.

Let us suppose (says Huxley) that one of the stupid, salamander-like Labyrinthodonts, which pottered, with much belly and little leg, like Falstaff in his old age, among the coal-forests, could have had thinking power enough in his small brain to reflect upon the showers of spores which kept on falling through years and centuries, while perhaps not one in ten millions fulfilled its apparent purpose and reproduced the organism which gave it birth: surely he might have been excused for moralising upon the thoughtless and wanton extravagance which Nature displayed in her operations. But we have the advantage over our shovel-headed predecessor—or possibly ancestor—and can perceive that a certain vein of thrift runs through this apparent prodigality. Nature is never in a hurry, and seems to have had always before her eyes the adage, "Keep a thing long enough and you will find a use for it." She has kept her beds of coal many millions of years without being able to find much use for them; she has sent them down beneath the sea, and the sea-beasts could make nothing of them; she has raised them up into dry land, and laid the black veins bare, and still, for ages and ages, there was no living thing on the face of the earth that could see any sort of value in them; and it was only the other day, so to speak, that she turned a new creature out of her workshop, who by degrees acquired sufficient wits to make a fire, and then to discover that the black rock would burn.

Of all our aids to knowledge, it has been said, none has been more fruitful in results, none has been of more importance to our nation than the old-time discovery that in the crust of the earth certain black stones called coals exist, and that with these coals a fire can be kindled. All the boasted material advantages of our civilisation and the commanding industrial position of this country have sprung from this discovery. It is a pity that we cannot say with any approach to certainty when it was made, and that the iniquity of oblivion blindly scattereth her poppy on the name of the highly-respectable discoverer. In this country, with which we are now chiefly concerned, it seems likely that coal was known and worked at a period long antecedent to the dawn of history. Sir Charles Lyell mentions the discovery of an ornament of cannel coal in Scotland in a situation which, in his opinion, indicated that it must date from a time fifteen centuries before our era—or about the period usually assigned to the exodus of the Israelites from Egypt. Even in the barbarism of the Stone Age it seems that our coal was utilised by the natives, since a flint axe has been discovered in Monmouthshire, stuck fast in a seam of coal, where some alarm must have caused the painted savage who owned it to abandon it. Pickaxes of solid oak have been found in old excavations in Derbyshire, and stone hammer-heads, wedges of flint, and wooden wheels in coal workings, which are evidently of great antiquity, at Ashby-de-la-Zouch. Beds of coal and lignite crop out on the surface in many places, and the prehistoric Briton, blue with cold and woad, must have made an accidental discovery of their properties at a very early period. Certain it is that the walls of his rude huts, when built of these dark rocks, did occasionally

COAL PRODUCTION OF THE WORLD

COUNTRY.	Area of Coalfields, when ascertainable.	1850.	1860.	1870.	1880.
	Sq. miles.	Tons.	Tons.	Tons.	Tons.
England and Wales	4,304	42,195,000*	69,022,773	95,355,169	128,560,821
Scotland	1,000	6,805,000*	10,900,500	14,934,553	18,274,886
Ireland	....	110,000*	119,425	141,470	133,702
Total for the U.K.	....	49,110,000*	80,042,698	110,431,192	146,969,409
Austria	....	856,950	2,974,700	7,101,850	14,095,400
Hungary (incomplete).	....	10,740	....	1,319,134	1,818,440
Belgium	....	5,820,588	9,610,895	13,697,118	16,886,698
Canada (Dominion)	....	No return.	No return.	No return.	Imperfect.
Cape Colony	....	No return.	No return.	No return.	....
China unobtainable)	200,000	....	....	....	....
France	(?) 1,200	4,367,064	9,525,169	13,230,354	19,071,141
German Empire	(?) 3,600	....	....	34,003,000	59,118,100
India	35,000	....	368,960	431,828	1,019,793
Italy — Lignite	....	....	30,280	58,770	139,369
Italy — Turf	....	....	20,000	100,000	100,000
Japan	....	....	....	....	....
Natal	....	No return.	No return.	450	No return.
New South Wales	....	71,216	368,862	868,564	1,466,180
New Zealand	....	No return.	No return.	No return.	299,923
Orange Free State †	....	....	....	....	....
Queensland	....	In N.S W.	12,327	22,639	58,052
Russia	27,000	....	....	672,767	1,885,178
S. African Republic	....	....	....	....	....
Spain	....	....	....	....	847,128
Sweden	....	....	....	....	....
Tasmania	....	Imperfect.	No return.	9,786	12,919
Turkey (unobtainable).	....	....	....	....	....
United States	200,000	....	17,834,000	32,863,000	63,822,830
Victoria	....	Part of N.S.W.	Coal raised	from 1851 13,068 tons.	to 1884 was

* Estimated. † Promised, but not yet completed.

COAL AND COAL-MINING.

(INCLUDING TURF AND LIGNITE), 1850–95.

1890.	1891.	1892.	1893.	1894.	1895.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
157,233,432	159,949,279	154,483,067	138,737,199	166,683,367	160,734,283
24,278,589	25,424,166	27,191,923	25,482,918	21,481,554	28,792,693
102,267	105,681	111,881	105,678	112,604	125,586
181,614,288	185,479,126	181,786,871	164,325,795	188,277,525	189,652,562
23,896,100	24,989,450	25,028,850	26,151,750	26,496,500	....
3,243,910	3,447,279	3,606,578	3,900,697	4,212,378	4,542,951
20,365,960	19,675,644	19,583,173	19,410,519	20,458,827	20,414,849
3,117,661	3,623,076	3,292,547	3,201,742	3,666,769	3,512,504
33,021	27,677	41,717	58,995	69,640	86,595
....	....	....	....	....	....
25,691,872	25,634,520	25,786,021	25,266,217	27,005,652	27,812,499*
89,290,800	94,252,300	92,544,100	95,426,100	98,805,702	102,000,000*
2,168,521	2,328,577	2,537,696	2,562,001	2,820,652	4,369,997
376,326	289,286	295,713	317,249	271,295	305,321
42,185	39,272	29,444	27,848	34,911	21,699
2,598,114	3,168,875	3,176,840	3,317,104	4,268,000	....
65,188	126,144	115,408	138,610	151,520	155,367†
3,060,876	4,037,929	3,780,968	3,278,328	3,672,076	No return.
637,397	668,794	673,315	691,548	719,546	....
....	....	....	....	....	....
338,344	271,603	265,086	264,403	270,705	323,068
5,901,493	6,115,605	6,815,143	7,470,293	8,538,298	8,900,766
....	....	....	....	812,882	1,152,206
1,187,036	1,289,797	1,464,778	1,519,905	1,709,742	1,900,000*
187,512	198,033	199,380	199,933	213,634	....
53,812	45,524	35,669	34,042	30,922	....
....	....	....	....	....	....
140,882,729	150,505,954	160,115,242	162,814,977	152,447,791	172,426,366
14,601	22,834	23,963	91,726	....	....

* Estimated. † Year ending 31st October.

ignite and change into a cindery mass. History is given to repeating itself, and we are told that one of the chief veins of coal in Pennsylvania was discovered by a hunter who found one night, to his dismay, that the mountain ledge upon which he had built his camp fire was itself in flames.

But, in general, the use of coal was not practised by the ancients. In those well-timbered days wood was so much handier that no man was driven to digging for fuel. The "coals" often mentioned in the Bible are invariably either wood or charcoal. The earliest allusion to coal in literature is that of the Greek Theophrastus, about 300 B.C. He speaks of the stones which are dug out of the ground and burn like charcoal, and adds that they are used by the metal-workers in Elis and Liguria, where beds of lignite are still easily accessible and in common use. For the next three centuries coal is mentioned by most of the Greek and Latin writers on minerals, but rather as a drug or a charm than as a fuel. Thus Pliny tells us that coal-dust mixed with wine is a cure for the toothache, but mingled with water makes the best of hair-washes, and that a piece of coal set in a ring will keep away evil spirits; this last remark probably refers to jet.

Cæsar does not mention coal in his account of the mineral wealth of Britain, but it is highly probable that his followers learnt to make much use of it in our uncertain climate. Excavations on the site of many Roman towns have brought to light both stores of unused coal and accumulations of cinders. Hadrian's Wall is built in part on the outcrop of the Newcastle coal-field, where the Romans may have learnt the use of the fuel; it long gave a name to the famous Wallsend seam. But this coal was used only for domestic and religious purposes, on hearths and altars. The smelting of iron was always performed by wood, as the cinders survive to show; for the chief iron field of ancient Britain and early England was in the Weald of Kent and Sussex, and there was no coal there, but abundance of wood.

With the departure of the Romans it seems that coal again fell into disuse. At least the earliest indication of its existence is found in a lease of the Abbot of Peterborough, 853 A.D., which provides for a part of the rent to be paid in *græfan*, by which it is generally supposed that coal is meant. Domesday Book takes no notice of any coal pits, but about the end of the 12th century we find that leases were granted to certain persons in the County Palatine of Durham on condition that they dug enough coals for the consumption of the local blacksmith. In the second decade of the 13th century Newbattle Abbey, near Edinburgh, received the gift of a coal mine in working order. Shortly afterwards, in 1239, the citizens of Newcastle laid the foundation of their great coal trade by receiving a charter from Henry III. giving freemen of the town the sole right to deal in the coals of the district. This gave an impetus to the youthful industry, and the new fuel soon got as far as London, where we find "Secole Lane" mentioned in 1253. Coal was variously called *earth-coal*, *pit-coal*, *stone-coal*, and *sea-coal*, to distinguish it from the older *coal*, which was our charcoal. As to the name of sea-coal, there is some dispute whether it refers to the coal's carriage by water or its origin by the seaside: the latter seems to be the correct view.

There is one good piece of evidence as to the proportions which the trade in coal had reached by the end of the 13th century. About 1306 A.D. there was raised in London that cry for smoke-prevention which has echoed round our chimneys ever since. The "sulferous smoke and savor of the firing" of the sea-coal came to be looked on as an intolerable nuisance in the Metropolis, although, as often happens, visitors to the City for the purpose of attending Parliament or doing business were more struck by the evil than the inhabitants themselves. A royal proclamation against the use of sea-coal had no effect, whereupon a commission of Oyer and Terminer was appointed, A.D. 1307, with instructions "to inquire of all who burnt sea-coals within the City and parts adjoining, and to punish them for the first offence with great fines and ransoms, and upon the second offence to demolish their furnaces." Even this had so little effect that in the same year the Clerk of the Royal Palace bought ten shillings' worth of coal for use at the coronation of Edward II.! It was in vain, in fact, to struggle against so inevitable a change, and from this time forward sea-coal was in constant use as a domestic means of warmth and cooking, as well as among brewers, lime-burners, dyers, and others who needed much fuel, with the exception of metal-workers, who still found charcoal more convenient. Was it not beside a sea-coal fire that Falstaff made that famous promise to Dame Quickly? Yet the new fuel had strong prejudice to overcome. Many years later Stow tells us that the nice dames of London would not come into any house or room where sea-coals were burned, nor willingly eat of the meat that was either sod or roasted with sea-coal fire. In 1679 the famous John Locke, being afflicted with asthma, could not tarry long at London, the sea-coal that was burnt there being so very offensive to him. We are grown hardier nowadays, and, in London at least, find it easy to take Mr. Morris's advice and "forget six counties overhung with smoke."

As late as 1769 the Parisians refused to admit coal to their city, and we know that even to-day they cling fondly and wisely to their dainty charcoal cooking-stoves. In that year wood happened to be very dear in Paris, and some English merchants conceived the idea of sending cargoes of coal from the English collieries to supply the scarcity of fuel in France. Vessels were despatched with coal from Newcastle, which was sent up the Seine and soon reached Paris. The coal which was sent from England was at first used by the common people, and then by some of the higher classes in the stoves and fireplaces of ante-chambers. There was a general outcry. The unfortunate mineral fuel was accused of vitiating the air, of soiling the linen when drying, of causing affections of the chest, and, worst of all, impairing the delicacy of the female complexion. Such complaints increasing, the Academies of Science and Medicine were appealed to. They gave their opinion for coal, but it had no effect on the popular frenzy, and that speculation of the English merchants proved abortive.

Similar prejudices still exist in more southern countries. The present writer remembers a pleasant winter evening passed, a few years ago, around a cheerful coal fire with Scottish friends resident in Italy. The familiar home-like glow was particularly grateful to the traveller, who learnt, however, that when Italian visitors called, especially ladies, they always sat as far as possible from the fire, and often withdrew altogether, complaining of headaches, which they attributed to the burning of *carbone fossile.*

About the year 1600 the adoption of sea-coal for domestic purposes became general in England. The real cause of this was that wood was gradually getting scarce, and, at the same time, the iron furnaces, which could only use wood or charcoal, and so had first claim on the forests, were increasing in number. One ironmaster was said to have cut down 30,000 oaks, whilst the iron "bloomaries" of High Furness threatened utterly to destroy the trees and the amenities of the neighbourhood. The Government, which needed timber for ships, and the ironmasters, who foresaw a dearth of fuel, were alike eager to find some way of adapting coal to wider uses. The substitution of coal for wood in the smelting of metalliferous ores, and particularly in the manufacture of iron, was the most important as well as the most difficult industrial problem of the 17th century. Cardinal Wolsey had been one of the first to attack it; but no success was gained for more than a hundred years. Then the famous Dud Dudley, a natural son of Lord Dudley, who managed his father's iron furnaces in Worcestershire, discovered that coal could be used as well as charcoal in iron-smelting if a strong enough blast were employed in the furnace. His discovery hung fire in consequence of his personal misfortunes and the Civil War; but once made it was not forgotten, and by the end of the 17th century coal had made its second great step in advance by being employed in the smelting of iron, lead, tin, and copper. The day of charcoal, as used in the arts, was well-nigh over, and the great Coal Age was about to commence.

One result of this was a speedy increase in the demand for coal. Up to 1660 the annual produce of the kingdom had taken four centuries to climb from zero up to 2,000,000 tons. In 1700 it was 2,612,000 tons, and in 1750, when it was in common use for all the metallic manufactures, the production had risen to four and three-quarter million tons. The possibility of this increase was due to a great improvement in the method of mining, which itself led again to a vast development in the usefulness of coal by the invention of the steam engine.

The earliest coal-miners worked in a very modest fashion, choosing to quarry wherever an out-crop of coal manifested itself rather than to mine. Their tools were the pick, the hammer and wedge, and the wooden shovel; blasting was unknown, and the only machine was the windlass for raising the coal. In Scotland even this adjunct was omitted, the coals being borne up ladders on the backs of women. Ordinary pumps or buckets on ropes were the only things available to keep the pits dry, and consequently it was impossible to work at any great depth. Most of the early mines, indeed, were exploited by means of adits or levels driven into the side of a hill. In 1700 men were already beginning to foresee the approaching end of the coal, just as the alarmists are to-day. Probably the miners were not sorry, for their condition was singularly unfortunate. A system of slavery had grown up amongst the colliers, particularly in Scotland.

> It was important to the employer (says Dr. Cunningham) to be able to command the regular and constant service of a number of labourers, and customs grew up by which the miners were just as definitely astricted to particular mines as villans had been to particular estates in the middle ages. This custom was especially noticeable in Scotland; an attempt had been made to break it down in 1775, but apparently with little success, for further legislation was necessary in 1790.

Colliers were bound by law to perpetual service in the mine which they first entered, and were sold with it. Their sons could follow no other occupation, and were not at liberty even to change the mine. Perhaps it is by a survival of this custom that mining is so often hereditary in the collier's family nowadays. These "bondagers" were practically serfs. An Act passed by the Scottish Parliament in 1606 not only gave effect to their enslavement, but added permission for the coal-owners to seize any able-bodied vagrant and put him to work in the mine for the rest of his life—an anticipation of the modern idea of compulsory labour colonies. A later Act ordered the coal-hewers to work six days a week, under penalty of a fine of twenty shillings for each idle day, and "other punishments of their bodies." What would our modern trades unions say to that?

Up to the end of the 17th century, water was the great enemy of the coal-owner. Little but the coal above the level of free drainage could be brought to the surface. Attempts were made now and then to work deeper mines, by means of water-tight casings and chain-and-barrel pumps worked by horse-gins. But none of them was at all satisfactory. Many good mines were allowed to lie unwrought and drowned, it being found impracticable to drain them by means of any machine then known. At this critical time—about 1710—Newcomen intervened with the earliest practical steam engine, or, as he called it, the "atmospheric engine," which was at once easy to handle and powerful enough to drain the deepest mine which men had then imagined. From that day water was under control, and coal mining, as distinct from quarrying, takes its origin.

At the beginning of the 18th century, when the annual coal-production of Great Britain was a little over two and a half million tons, the deepest mines only penetrated to about 300 feet below the surface. The means then adopted to keep the pits clear of water were cumbrous and uncertain; either a chain and buckets or a series of common pumps, one for every thirty feet, were the only appliances available. Newcomen's engine carried out ideas which had already been indicated in a rudimentary form by Papin and Savery; it is said to have produced a new era in the mining and commercial interests of Britain, and at once put many a coal-field which was considered as lost within the grasp of its owner. The improvements which have since been made in pumping machinery have made it possible to work coal profitably to a depth of 3,000 feet, or even more. The miners' once dreaded foe, underground water, is now only dangerous when a store of it is suddenly tapped, as in the workings of a deserted mine; it may then drown a whole pit before the pumps can cope with it. To avert this danger the Mining Record Office was established in London, where the law requires that the plans of all disused workings shall be deposited for future reference. The plans are not always trustworthy, but the principle is sound.

As the pits went deeper, thanks to the introduction of steam for pumping, they began to enter the sphere of another great danger—fire-damp and its attendant demons of the pit. The first great calamity due to the "sulphur," as it was then called, and as some miners still name the dangerous gas, took place in a pit near Gateshead, in October, 1705. Over thirty lives were lost, six persons—a woman among them—having been blown right out of the shaft, although it was nearly sixty fathoms deep. Three years later sixty-nine lives were lost in an explosion near Chester-le-Street, and similar disasters followed fast. It had already been discovered that an inflammable gas was apt to collect in the deep coal pits, and an attempt had been made to ventilate the mines by the plan of having two shafts, through which the air might circulate freely. In 1732 the next step was taken by the introduction of a furnace or "fire-lamp" in the up-cast shaft, which created a draught through the workings. This plan has only of late years been abandoned in some mines, on account of the danger caused when the furnace itself ignites an issuing mixture of air and fire-damp. For seventy years improvements in the system of ventilation were the only means of fighting the terrible fire-damp, whose explosive violence ever and anon accounted for a dreadful tale of victims.

In those ante-chemical days the nature of explosions, of the fire-damp which caused them and the choke-damp which they left behind, was so entirely ignored that it is no wonder that no attempt was made to defeat their violence. The explosive gas was called "sulphur," partly because of its blue flame, partly because the alchemists had imagined that every combustible substance must contain sulphur. But we now know much about explosions and their mechanism.

We have already seen that in the formation of coal from vegetable matter one of the by-products was that compound of carbon and hydrogen known as marsh-gas (CH_4) from its frequent occurrence in swampy places. Much of this gas remains in the pores of the coal, under the pressure of the superincumbent strata, and more of it is still formed in the seams. This gas is fire-damp. When a gallery is driven through the seam, and the pressure thus diminished, the gas escapes, either by imperceptible oozing or in strong jets known as "blowers." If a naked light comes in contact with a blower the gas takes fire and burns without danger, except that, if not soon extinguished, it may set fire to the coal itself: mines have often been fired and rendered unworkable in this fashion. If, however, the gas has become mingled with air in the passages of the mine, in the proportion of from 5 to 20 per cent by volume of fire-damp, it constitutes an inflammable and often a highly explosive mixture, which may be ignited by a naked light, by an accidental spark from a pickaxe, or by the explosion of gunpowder in blasting. Many of the fatal accidents from explosions in mines have been thus caused, and till recently it was believed that so were all. It has lately been thought, however, and is now proved by the investigations of a recent Royal Commission, that coal-dust scattered about the mine is as fertile a source of explosions as fire-damp itself, and that the possibility of explosion is greatest when the two appear together. The reports on recent explosions at Micklefield and Brancepeth illustrate this theory.

The following summary of the second and final report of the Coal Dust Commission shows the latest views on the subject. The report commences with a brief account of the rise and progress of the coal-dust theory, which is summarised as follows:—

I. The circumstances of many explosions, especially of explosions on a very large scale, cannot be fully explained by reference to fire-damp alone.
II. The presence of coal-dust, and especially of fine dust, may be the sole cause of an explosion.
III. If the coal-dust is in sufficient quantities it will certainly extend the effect and increase the intensity of an explosion caused by any other means.
IV. Fire-damp in small quantities, so small as not to be dangerous *per se*, may be highly dangerous in the presence of coal-dust.

After discussing these points, and giving details concerning recent great explosions, the Commissioners sum up their conclusions as follows:—

1. The danger of explosion in a mine in which gas exists, even in very small quantities, is greatly increased by the presence of coal-dust.
2. A gas explosion in a fiery mine may be intensified, and carried on indefinitely, by coal-dust raised by the explosion itself.
3. Coal-dust alone, without the presence of any gas at all, may cause a dangerous explosion if ignited by a blown-out shot, or other violent inflammation. To produce such a result, however, the conditions must be exceptional, and are only likely to be produced on rare occasions.
4. Different dusts are inflammable, and consequently dangerous, in varying degrees, but it cannot be said, with absolute certainty, that any dust is entirely free from risk.
5. There appears to be no probability that a dangerous explosion of coal-dust alone could ever be produced in a mine by a naked light or ordinary flame.

Having examined certain precautions suggested, such as the abandonment of gunpowder, the use of flameless explosives, of water cartridge, or of lime cartridge, the Commissioners say:—

1. That the use of high explosives would greatly limit the risk of explosion in dry and dusty and fiery mines.
2. That the Secretary of State should be empowered by further legislation to prohibit the use of gunpowder in the case of every mine which is either fiery or dry and dusty, unless sufficient and effective means of watering are carried out.
3. That explosives for use in mines should be examined and certified by the Home Office as fit for the purpose.
4. That all tamping should be done with clay or other non-inflammable substances.
5. That the only effectual way of remedying the danger arising from coal-dust is by a complete and satisfactory system of watering.
6. That the Inspectors should give notice when they consider the provision for watering insufficient.
7. That, finally, the owners and managers of mines should pay special attention to the following precautions:—

(*a*) That the firing of shots should be carried out between the shifts, and when the majority of the men are out of the mine.

(*b*) Where general watering is not prescribed by the Inspector, that the roads on either side of the place where a shot is fired should be thoroughly wetted for a space of at least 30 yards; and

(*c*) That large accumulations of dust, whether on the roof or floor, should not be allowed to remain.

It remains to add that the danger arising from an explosion of fire-damp, or coal dust, or both is two-fold. Men in the pit may be slain outright by shock or burning; or they may be suffocated by the deadly after-damp. An explosion of any magnitude consumes most of the oxygen in the air of the mine, and replaces it by irrespirable or even poisonous gases. The combustion of marsh-gas (CH_4) produces water vapour (H_2O), and carbonic acid gas (CO_2), whilst that of coal-dust produces carbonic acid gas (CO_2), or, if the supply of oxygen be, as usual, limited, carbonic oxide (CO). The water-vapour is quickly condensed, and the resultant atmosphere contains a mixture of nitrogen, carbonic acid gas, and carbonic oxide. A man drowns in the two first gases just as quickly as in water, while carbonic oxide has a direct action upon the blood, rendering it incapable of taking up oxygen. Thus a man exposed to it is literally poisoned, and there is much less likelihood of restoring him than if he had merely been asphyxiated by carbonic acid, although recent experiments show that the use of pure oxygen as an antidote holds out some hopes. An explosion of any magnitude usually disarranges the ventilation of the pit, which must be restored before rescuers can go down. This explains why so often every man in the workings involved perishes.

In the history of coal-mining, so far as the welfare of the miners is concerned, the most important chapter, perhaps, is that of the long struggle with fire-damp. As we have intimated, it has been going on for two centuries, and although much has been done to alleviate the lot of the miner, he still works in many mines under a perpetual sword of Damocles, which may be precipitated on his head at any moment by his own imprudence or that of others, or even by sheer accident.

As early as 1675 explosions of fire-damp had been known as common phenomena, but it was only after the pits were deepened, on the adoption of the steam pumping-engines, that they began to become serious dangers to life. Ventilation was the first remedy that suggested itself, coupled with the dangerous practice of sending down "firemen" to ignite such accumulations of fire-damp as the current of air had failed to sweep away. The general introduction of furnaces in connection with the up-cast shaft assisted greatly in this work. Still, as the workings extended, fiery pits became more common. About 1735 one Spedding, manager of the Whitehaven collieries, invented a novel means of producing light without so much danger as candles caused. His "steel mill" consisted of a thin disc of steel, five or six inches in diameter, which a handle turned with great rapidity, whilst its edge was applied to a piece of flint. This gave rise to a continuous flow of brilliant sparks, by whose light dangerous mines could be worked. The steel mill was not infallible, however, and more than once the colliers had to resort to such desperate shifts as the employment of putrefying fish to light the workings by their feeble phosphorescence. In 1760 the son of this Spedding made another great advance by inventing the system of ventilation known as "coursing the air," whose principle is still in universal use, by means of which the air is passed through every part of the mine on its journey between the down-cast and up-cast shafts, and no place is left, as of old, for the accumulations of fire-damp in disused workings.

Still the fire-damp remained master in the deep and fiery pits of the North of England. Every year explosions took place, which the mistaken policy of the coal-owners endeavoured to hush up. In the opening of the Wallsend colliery the steel mill lost its reputation, being proved able to ignite an explosive mixture. At the beginning of the present century it became impossible to keep the heavy loss of life secret, and one John Buddle, manager of the Wallsend mine, set himself seriously to combat the difficulty. He effected yet another improvement in the ventilation system by introducing the ideas of "panel working," or dividing the mine into independent ventilation areas, and "splitting the air," or using more than one down-cast shaft and air current. This was the germ of the system practised in all the well-regulated collieries at the present day. But this was not enough. A disastrous explosion near Gateshead called public attention to the matter. Pamphlets were published by philanthropists, and a society was formed to investigate the question of colliery explosions: the Government had more pressing business on its hands. Several persons had already thought of the possibility of producing a "safety-lamp" for use in the mines. Dr. Clanny actually constructed one, which was safe, but unsuited to general use. The society had the happy idea of calling in the assistance of Sir Humphry Davy, the most famous chemist of the day, and the result was the speedy invention of the Davy lamp, in which the flame is shut off from the external air by a screen of wire gauze, through which it cannot pass under ordinary conditions. Davy valued his safety-lamp more than anything else he ever did, and few human inventions can have been the means of saving more lives.

To this day modifications of the Davy lamp are in use in every fiery pit. Without them, the working of such mines would be dreadfully hazardous, if not impossible. It seems likely that before long coal mines will be lighted by electricity, and there is no sufficient practical objection to this but one—expense. No safety-lamp is so absolutely free from danger as the incandescent electric light. Yet the miner preserves a pleasing habit of carrying illegal pipes and matches down the pit, which makes it improbable that colliery explosions will ever be quite unknown. Some people, however, think that more stringent legislation would attain this object.

Explosions are not the only accidents to which the collier is liable. The greater proportion of lives annually lost is from falls of the roof or sides of the mine. These are usually supported by timber beams and pillars, and controversy rages as to whether the miner should be left sole judge of the quantity of these necessary for his safety. In some mines he has to do his own timbering at his own expense, and it is believed that the proportion of such accidents is higher in these mines than in those in which a special staff of men is retained and paid to put up the props.

On the whole, the precautions which have been taken, as well by Government as by private persons, for the safety of the miner have been justified by their results. The proportion of fatal accidents to the number of men employed and to the amount of coal raised has been steadily decreasing for the last fifty years, as is clearly shown by the interesting diagrams given in Dr. Le Neve Foster's admirable Report for 1894. For example, the death-rate per 1,000 persons employed underground in the mines of the United Kingdom in 1851 was 5·5. Year by year it oscillated about a steadily decreasing figure, until in 1864 it sank as low as 3·3. In 1866 the terrible Oaks disaster, in which 361 persons perished, sent it up with a bound to 5·4. Thereafter it has continued to decrease, being down one year and up the next, but always getting smaller on the whole, until in 1895 it stood at 1·63 deaths per 1,000 persons employed underground. The statistics will be found in the Tabular View of the Coal Industry, pages 472 and 473.

It would obviously be impossible here to give any detailed account of the way in which a modern colliery is worked. That would involve the reader's becoming an expert in a complicated branch of engineering. But a brief outline of the main processes involved in getting coal may be attempted.

When a new coal-field is to be exploited, the first proceeding is that of "winning" the coal, or gaining access to it. By means of a series of bore-holes, guided by geologists' knowledge of the surrounding land, the strata are mapped out and the seam or

TABULAR VIEW OF THE

Year.	Number of Collieries.	Persons Employed.		Annual Output of Coal, in Tons.			
		Under ground.	Above ground.	England and Wales.	Scotland.	Total, incl. Ireland.	Average output of each worker below ground.
1850	*	*	*	†42,195,000	†6,805,000	†49,110,000	*
1860	2,949	219,298	56,549	69,022,773	10,900,500	80,042,698	365·0
1870	2,851	‡278,961	‡71,933	95,355,169	14,934,553	110,431,192	395·9
1880	3,904	391,381	93,552	128,560,821	18,274,886	146,969,409	375·5
1890	3,409	506,812	125,568	157,233,432	24,278,589	181,614,288	358·3
1891	3,439	536,091	131,892	159,949,279	25,424,166	185,479,126	345·9
1892	3,403	549,312	134,320	154,483,067	27,191,923	181,786,871	330·9
1893	3,383	549,738	133,270	138,737,199	25,482,918	164,325,795	*a* 298·9
1894	3,419	569,678	135,562	166,683,367	21,481,554	188,277,525	*b* 330·4
1895	3,512	564,638	135,646	160,734,283	28,792,693	189,652,562	335·8
Averages. 1873-82	4,087	403,281	100,147	119,540,945	18,414,991	138,086,800	342·4
Averages. 1883-92	3,451	461,024	110,695	147,014,179	22,789,047	169,921,704	368·5
Averages. 1893-95	3,438	561,351	134,826	155,384,950	25,252,388	180,751,961	321·9

* No accurate returns for 1850.

† Estimated.

‡ 1870 returns include stratified ironstone mines. No separate statistics for coal mines.

COAL AND COAL-MINING.

COAL INDUSTRY, 1850-95.

Year.	Annual Export of Coal, in Tons.			Number of Deaths from Accidents. Underground Workers only.		
	England and Wales.	Scotland.	Total.	Total.	Per million tons of coal raised	Per 1,000 Miners.
1850	2,876,134	329,722	3,205,000	*940	*18·4	*5·5
1860	6,425,219	639,686	7,064,905	1,055	13·2	4·8
1870	9,839,849	1,338,127	11,177,976	880	8·0	3·3
1880	15,962,733	1,928,448	17,891,181	1,250	8·50	3·19
1890	24,431,429	4,306,812	28,738,241	1,057	5·82	2·08
1891	24,995,298	4,501,493	29,496,791	882	4·75	1·64
1892	24,114,002	4,934,054	29,048,056	904	4·97	1·64
1893	*a* 23,015,430	4,604,503	27,619,933	940	5·72	1·69
1894	28,019,898	*b* 3,359,938	31,379,836	1,015	5·39	1·78
1895	27,064,432	4,700,860	31,765,292	923	4·87	1·63
Averages. 1873-82	13,662,249	2,070,014	15,732,262	†1,065	†7·71	†2·64
1883-92	21,732,077	3,520,037	25,252,114	†937	†5·51	†2·03
1893-95	26,033,253	4,221,767	30,255,020	959	5·30	1·70

* Death rates are not to be had for 1850. These are for 1851; output was 51,000,000 tons.

† Estimates, assuming that 95·5 %, as in 1890–94, occurred in coal mines. Returns include all mines.

a Midland Strike—4 months. *b* Strike in Scotland—4 months.

seams of coal thoroughly examined. Then a shaft is driven vertically down to the lowest part of the workable coal, so that all water in the mine may run down to the "sump," or bottom of the shaft, from which it can be pumped. The next proceeding is to drive galleries at right angles to the shaft into the coal; these are connected by other cross-galleries, and at the other end of the system another pit is sunk for purposes of ventilation. This is called the up-cast pit, and by means of a furnace at the bottom of it, or, as is more usual nowadays and much safer, a powerful fan at the top, a current of air is established throughout the workings. Doors are so placed at the end of each gallery that, however the workings advance, the air-current traverses each one of them on the way from the down-cast to the up-cast shaft. This keeps the mine ventilated and sweeps away all dangerous gases as they arise. It is now obligatory to have two independent shafts, so that if an accident chokes one the other is available for the miners' escape; and, as we have already mentioned, most modern collieries have three or more shafts. The great depth of mines now renders it necessary for a much larger area of coal to be worked from one set of shafts than was the case in the old days.

The planning of the mine, so that all the coal within reach can be removed in the most economical and expeditious manner, is the duty of the manager, on whose skill very much of the ultimate success depends. He also has to decide on the method of extracting the coal. One of the two chief systems, known as "long-wall" working, resembles that adopted in metalliferous mines, and consists in the removal of all the coal along the working face. The roof is then allowed to fall in, the necessary roads to the shaft being alone walled up and retained. In the other system, variously named "stoop and room," "post and stall," and "pillar and bord," only part of the coal is removed on the first working, and posts, pillars, or stoops of solid coal are left to support the roof. When the whole area has thus been covered the pillars are removed and the roof is allowed to settle, beginning with the furthest part of the workings from the shaft. Local considerations decide which plan is to be adopted, "long wall" being usually found suitable for the thinner seams, and "stoop and room" for the thicker ones.

No mechanical invention has yet generally replaced hand-labour at the working face of the coal, although some attempts have been made to supplement it with coal-cutting and boring machines. Coal is extracted by under-cutting and wedging, or by blasting. In the former plan the miner cuts a deep groove in the coal at the bottom of the face, and then, if the coal does not fall by its own weight, he loosens it by wedges driven in above. In the latter, he bores holes in the coal and inserts a cartridge in each, then fires his "shots," and returns to shovel the fallen coal into the wagons which take it to the shaft.

The great drawback to blasting in a fiery mine is that the flame of gunpowder is apt to ignite any fire-damp in the neighbourhood, whilst high explosives, when first introduced, shattered the coal too much for commercial purposes. Now, however, several flameless explosives have been especially adapted to use in collieries, whilst compressed air, hydraulic pressure, and the expansion of quick-lime when slaked have all been tried as rending agents. There can be no doubt that accidents would be sensibly diminished if the use of gunpowder in a dusty or fiery mine were entirely prohibited by law, according to the suggestion of the Commission already quoted. The work of under-cutting the coal has been called one of the severest labours known to man, and it is to be regretted that more encouragement has not been given to the various machines, chiefly worked by compressed air, which have been devised for performing it. But, apparently, men come cheaper.

The haulage of coal from the "face" to the shaft and up to the pit bank is usually accomplished by steam engines at present. In early times the former part of the work was done by women or boys, and the latter by horses, or conversely. Steam was first applied to the shaft in a round-about fashion, in 1776, by using Newcomen's engine to pump water, which turned a mill wheel, which raised the coal. But Watt was already at work, and by the end of the century the steam engine had taken up that duty also, not yet to be replaced. Cages and wire-ropes were introduced about 1835, and soon became general. Many safety appliances have since been added to these to minimise the chances of an accident in the shaft.

It will be convenient at this place to insert a table showing the quantity of coal annually produced in the United Kingdom at intervals from 1660 to 1895. The rise between 1660 and 1750 is due to the increased consumption of coal for cooking and heating in private houses, and for manufacture in the arts. From 1750 to 1800 the rise is due chiefly to the invention of processes for using coal in the manufacture of iron. From 1800 onwards the increase is caused by the development of the steam engine and the use of coal as a source of power, along with which has gone a corresponding increase in the production of iron and steel, and in manufactures generally. After 1820 the exportation of coal begins to grow important, and the statistics of that have been added.

In 1840 the production was a little over one ton per head of the population; in 1895 it had risen to nearly five tons per head.

1660–1894.

COAL PRODUCTION (UNITED KINGDOM).

Year.	Production.	Consumption.	Export.
	Tons.	Tons.	Tons.
1660	2,148,000		
1700	2,612,000	a trifle less.	Export of coal began as early as 1325, but was too small to be worth mentioning up to 1820.
1750	4,773,828		
1770	6,205,400		
1780	6,424,976		
1790	7,618,760		
1800	10,080,300		
1820	12,500,000	12,250,000	250,000
1830	15,000,000	14,500,000	500,000
1840	30,000,000	29,000,000	1,000,000
1850	49,000,000	46,000,000	3,000,000
1860	80,000,000	72,700,000	7,300,000
1870	110,000,000	98,000,000	11,000,000
1880	147,000,000	129,000,000	18,000,000
1889	177,000,000	149,500,000	27,500,000
1890	182,000,000	153,250,000	28,750,000
1891	185,000,000	155,500,000	29,500,000
1892	182,000,000	154,000,000	29,000,000
1893	164,000,000	136,400,000	27,600,000
1894	188,277,525	156,897,689	31,379,836
1895	189,661,362	157,896,070	31,765,292

N.B.—The figures from 1660 to 1800 are taken from the Report of the Royal Commission on the duration of the coal supply. The other figures, with the exception of the last two years, are given in round numbers.

It is impossible to leave the subject of coal-mining without glancing at the financial system under which it exists. The complete discussion of this is matter for the economist and the politician, but some points of it may be briefly considered with advantage.

Coal, like all minerals with the exception of gold and silver, belongs to the proprietor of the land under which it is found. When a new seam is discovered, the owner has three courses open to him. He may either work the coal himself, or may let the right of working it; or he may refuse to have it touched. In the last case, which may be conceived as adopted by a "Fine old English Gentleman," with no need to add to his income, but an aversion to coal pits, the coal is left practically derelict, and no person has the right to interfere with it. But valuable fields of coal have sometimes to be abandoned for another reason. They may be too small for it to be worth while to sink shafts specially for them from the lands of the proprietor overhead. In such cases the usual course is to draw the coal underground through the workings and up the shaft on a neighbouring property, but it will be readily understood that the lordship or royalty on coal drawn direct from a property is much higher than the way-leave or charge paid for the right to draw from an adjoining property. An impecunious or greedy landlord, therefore, prefers to have his own coal worked, on which he gets the high royalty, rather than to see drawn under his land the coal of a neighbouring proprietor only paying him a way-leave. There have been such flagrant cases of greedy proprietors making it permanently impossible to work small but valuable portions of coal that the question has had to be dealt with by the Royal Commission on Royalties and Way-leaves.

In the event of the owner of the coal not wishing to work it himself, but desiring to add to his income, he usually lets the right of working on lease, which generally varies in England from twenty-one to ninety-nine years, and in Scotland from twenty to thirty-one years, although of course there is no fixed period in either country. The right to work coal is commonly paid for by a fixed annual rent, in addition to which a royalty is paid on every ton above a certain specified quantity. The fixed rent is usually from £1 to £2 per acre of the surface area, and may be as high as £5 in exceptional cases. The royalty may be charged per ton raised, per acre worked, or by a sliding scale depending on the selling price of the coal got. The most usual plan is to fix it at so much per ton, the average over the whole country being stated at 5½d. per ton. The highest rate is 1s. 2d. per ton in Scotland, and the lowest 2½d. in Northumberland and Durham. Royalties are subject to all kinds of variation, according to the special conditions of each bargain.

In addition to royalties, the mine-worker, whether on his own ground or by lease, is often obliged to pay the further charge referred to above, known as "way-leave." This, as its name indicates, is the price paid for permission to carry coal over another man's ground to market, or to mine one man's coal through another man's property. Both are usually charged at so much per ton carried, though here also customs vary, and a way-leave may be a fixed annual sum. In the United Kingdom in 1889, the last year for which the figures seem to be available, the amount paid in royalties on coal was £4,000,000, and in way-leaves £202,000. As the production was 177 million tons, the average charge was 5·6d. per ton.

Considerable dissatisfaction has long existed upon the subject of royalties and way-leaves. Some years ago a Royal Commission was in consequence appointed to investigate the matter. The Commissioners found that in 1889 only 41,000,000 tons of coal, or less than one-quarter of the total output, were subject to way-leave charges. They were of opinion that "the owners of mineral property, unreasonably debarred from obtaining access to the nearest or most convenient public railway, canal, or port on fair terms, or from obtaining underground easements on fair terms, ought not to be left without remedy."

A small section of politicians go beyond this, and hold that royalties and way-leaves ought, with or without compensation, to be abolished. It is an opinion like another, but its consideration involves the whole question of ownership of land. The matter might be settled by surface ownership alone being recognised, as in several Continental countries, all minerals being the property of the State. Royalties and way-leaves would then go into the State Treasury, and so benefit the public at large.

The idea that Government should interfere in the conduct of the coal industry for the good of the workers is essentially modern. Such interference as earlier rulers proposed was either for the benefit of the country at large or for the filling of their own private purse. Thus, Charles I. attempted to get a monopoly of the sale of coal to London, but he did not concern himself at all about hours of work, prevention of accidents, or the "living wage." More than once Parliament, as in the great frost of 1740, showed a disposition to interfere with the price of coal, but never with the regulation of the mines until well within the present century.

The first suggestion that the coal industry could not be carried on on a purely private and individualistic basis was the curious union of the Newcastle coal-owners, known as the "Limitation of the Vend," an arrangement to limit the amount of coal sold by any colliery in order that each of the collieries concerned might have a fair share of the trade. This was founded in 1786. Eleven years later an attempt was made to get the same coal-owners to use the influence of their association for establishing an office at Newcastle for the collection of mining records, especially plans of collieries, in order that accidents from breaking into old water-logged workings might be prevented in the future. This failed, and in 1815 it was suggested that Parliament might insist on such a registry being established. Nothing happened at the time, but by 1835 Parliament was prevailed on to appoint a Select Committee "to inquire into the nature, cause, and extent of those lamentable catastrophes which had occurred in the mines of Great Britain, with the view of ascertaining and suggesting the means for preventing the recurrence of similar fatal accidents." This Committee took some interesting evidence, and suggested that much good might be done if distinguished men of science would make a practice of visiting coal mines. In 1839 an independent Committee on another accident strongly urged the appointment of Government inspectors. Explosions went on happening; a public agitation was set on foot; Commissioners were appointed to report; finally, in 1850, the principle of Government interference was accepted, and the first Act for the Inspection of Coal Mines in Great Britain was passed. Already, in 1843, the late Lord Shaftesbury had passed his Bill forbidding the employment underground of women and boys under ten, which involved the establishment of inspectors. In 1860 these two Acts were amalgamated, and the number of inspectors was much increased. Soon afterwards a short Act was passed insisting upon two shafts in all collieries. In 1872 the law was altered into the "Coal Mines Regulation Act," which practically doubled the number of inspectors by providing each with an assistant, and in 1887 that Act was again amended into its present form.

A new Act, giving effect to the recommendations of the Royal Commission on Coal Dust Explosions, was passed in the last days of the Parliamentary Session of 1896, but the special rules attached to it have not been published as we write.

The Act of 1887 applies to all mines of coal, stratified ironstone, shale, and fireclay in the United Kingdom. Its alterations are mainly in the direction of promoting the safety of the miners, and of reducing the probability of explosions. It begins by forbidding the employment below ground of women and girls, or boys under twelve, and limits the employment of boys between twelve and sixteen below ground to ten hours a day and fifty-four hours a week. The sanitary provisions of the Public Health Acts and the Factory Acts apply to mines as to other places in which boys and women are employed.

The next section deals with wages, which are not to be paid in any public-house. An important clause gives the miners the right to appoint a "check weigher," whose office is to see that every man gets full credit for the coal he sends to bank when, as is usual, payment is by quantity. The check weigher can only be removed by the mine-owner with the consent of a Court of Law. Many labour disputes have raged over his by no means prostrate body. The Weights and Measures Act provides for regular inspection of the weighing machines.

The working of mines with a single shaft is then prohibited, and provision is made for the examining of colliery managers, who are all obliged to be in possession of a first-class certificate of proficiency in their business. Returns connected with the working of each mine are to be sent in annually to the Government, with plans of any pit which has ceased to be worked, which are filed for reference. In case of any accident involving "loss of life or serious personal injury" notice has to be sent within twenty-four hours to the Inspector, who makes an inquiry into the circumstances.

The next section provides for the appointment of Inspectors of Mines, the germ out of which the whole legislation upon mining has arisen. Inspectors are not permitted to have any interest, even as shareholders, in mines in their districts—a provision which was only introduced in 1887. Large powers of investigation are given to the Inspectors and their assistants. Open inquiries are to be held on all accidents, and the reports made public. The United Kingdom is divided into thirteen districts for purposes of inspection. Differences of opinion between an Inspector and a manager as to necessary precautions, &c., are to be settled by arbitration within twenty-one days at longest.

The second part of the Act lays down general rules for the management of mines, which embody the principles mentioned in an earlier part of this article. Adequate ventilation is to be kept up in mines at night and on Sundays and holidays, as well as during actual work. Ventilating engines are to be placed where they will not be injured by an explosion. Every part of the workings is to be inspected with safety-lamps at the commencement of each "shift," and the machinery is to be inspected daily, by "a competent person" appointed by the manager for this purpose. Workmen are to be at once withdrawn from any part of the mine found to be dangerous from gas. Locked safety-lamps are to be used in all fiery mines, and the possession of a key for them or of matches by miners is illegal, *except for the purpose of firing shots.* This last provision seems to neutralise all the good effects of the others, and it is now strongly urged that flameless explosives and electrical or percussion fuses should be made compulsory. Precautions as to the firing of shots in fiery or dusty mines are then enjoined. A shot is only to be fired (*a*) when the mine is free from gas "within a radius of twenty yards" of the shot, and has been properly watered; or (*b*) when the explosive is flameless. Here, again, it is considered that the second provision ought to be enforced in all cases for the sake of safety. Precautions against water and other accidents underground follow. It is provided that the miners may appoint two "practical working miners" on their own account to inspect the mine at least once in every month, whose report is to be sent to the Inspector if it states any reason to apprehend danger. Lastly, special local rules are to be added to these provisions according to the circumstances of each mine, and to be approved by the Government Inspector.

Legal penalties are attached to the breach of any portion of the Act, whilst its neglect affords a strong case, when miners are injured or killed by a resultant accident, for damages against the owner of the mine or the offending party.

In one respect, indeed, this great industry has, as we have said, been subject to earlier legislative interference. The coal trade was not long in existence before it attracted the attention of a paternal Government. Edward III., who was enlightened enough to perceive that from the working and distribution of coal "the greatest benefit will result to us and our people," placed a tax of 2d. per chaldron on coal shipped from the Tyne. We learn in the time of Elizabeth that this tax had long fallen into desuetude. That skilful financier squeezed a duty of 1s. per chaldron out of the coal-owners as the condition of overlooking the arrears, and imposed a five-fold duty on all coal exported over sea.

We may note here that the exportation of coal had, at an early stage, become a lucrative branch of trade. No statistics are available, but it is clear that our coal was regularly exported to the Continent in the 15th and 16th centuries. The practice began as early as 1325, when we read of ships coming from France with grain and returning with coal. The artificers of France were not so sensitive to the vapour of coal as the Parisians, of whom mention has already been made. In 1552, a letter speaks of "that thinge that France can lyve no more without than the fyshe without water; that is to saye, Newe-castele coles, which without that they can nother make stele worke, nor metall worke, nor wyer worke, nor goldsmythe worke, nor gonnes, nor no manner of thinge that passeth the fier." The modern exporter will hear with regretful envy that coal bought at Newcastle for 2s. 2d. the chaldron then sold in France for £4. 6s. 8d. But the very enormity of this gain caused the trade to be looked on with suspicion. Fuel was getting scarce at home, and the same arguments were used that are brought forward to-day against the exportation of coal. The question of prohibiting it altogether, as Mr. Galloway tells us in his very interesting history, was before the English Parliament in 1549, and was frequently discussed in later years. One suggestion was that all the best coal should be kept at home, but that foreigners might be allowed to purchase the inferior sorts. No actual steps, however, were taken in England. In Scotland, where grave fears were entertained as to the decay of the "coal heuchs," an Act of Parliament was passed in 1563 prohibiting all persons from exporting coal; the penalty was the confiscation of the offending ship and its cargo. The Act implies that coals were used as ballast by all empty ships, which caused "a maist exorbitant dearth and scantnesse of fewall." The chief result of this Act seems to have been that certain families managed to purchase licences to export coal, and made large fortunes out of the monopoly. Neither English nor Scottish Parliament has made a similar attempt since.

Elizabeth's successor, however, had perhaps noticed the Act in his Scottish Statute-book, for he increased the duty on exported coal by 3s. 4d. per chaldron if it went in foreign ships, 1s. 8d. if in English bottoms. He also attempted to tax coals for domestic consumption, but the people made it clear that they would not have such a tax, and he judiciously refrained. A chimney tax he succeeded in imposing, and it was only repealed by William III. Charles I. added 4s. a chaldron to the tax on exported coal: that, together with the commotions of the Civil War, seems to have practically killed the trade. The last attempt to tax coal consumed in Great Britain was that of Pitt, in 1796, which he abandoned a week after it had been proposed. Since then the trade has been free. From 1891 to 1894 sixteen per cent. of the whole coal produced in Great Britain was exported, and in 1895 seventeen per cent.

Of late years the old gloomy prognostications as to the speedy exhaustion of our coal supply, which we have already seen to exist with so little reason in the 16th century, have again made their way to the front. The growth of the export trade has been much more rapid than that of the output of coal; in 1854 the proportion of coal exported was 6·7 per cent. of the total output, in 1876 it was 12·2 per cent., in 1895 it had risen to 17 per cent. "At such a rate of increase," says that high economic authority, Professor Marshall, "it would seem as if our whole annual production would ultimately be swallowed up in our exports; and it is perhaps not impossible that, even after we have ceased to be to any great extent a manufacturing people, a certain export trade in coal may still continue." We hope to show in a little while that the gloomy portion of this prediction, made in 1878, is no longer in consonance with facts.

In the same place Professor Marshall gives us a lucid summary of the causes which have led to the development of this great and growing export trade in coal. The excellence of our coals and the enterprise of our people contributed largely to make England for five centuries "purveyor of coal to the world." But a still stronger impetus to the trade has been given by the exceptionally favourable situations of our coalfields for maritime conveyance. Even in these days of railroads, seaborne coal affords a great part of the supply of London. A glance at a map of the coalfields of the world would show that nowhere else can coals be so easily and cheaply put on board ship as they can be in our Newcastle, our South Wales, our Cumberland, and our Scottish coalfields. One development of the canal system in the latter half of the 18th century was an attempt to extend to our inland districts the advantages already enjoyed by coast-towns in this respect. The growth of the railway system has made some considerable differences, but a great portion of the Continental coastline is still commercially nearer to our coalfields than to those of the Continent.

> All round the coast of Europe, therefore, we are feeding the smithy fires of their villages, lighting their streets and warming their houses, supplying their arsenals and their ships with fuel, and contributing steadily in these and similar ways to the growth of their prosperity.

If our supply of coal was unlimited, or was periodically renewing itself like the corn and cotton which we get in exchange, no objection could be found to this state of things. The export of coal would then be simply one form of that exchange of labour for labour which lies at the root of all commerce. But the supply of coal is, by the very nature of things, limited; the present earth will never see a new Carboniferous Era.

More than a century ago this was recognised by some acute thinkers, notably by Sir John Sinclair, in the famous "Statistical Account of Scotland," and by Dr. Buckland, the geologist, who lost no opportunity of declaiming against any waste of so invaluable an article as coal. But the country at large was first aroused to a real sense of the case by the very ingenious and suggestive, though unduly pessimistic, work of the late Professor W. S. Jevons on "The Coal Question." In that book, published in 1865, Mr. Jevons sounded a note of warning which has been vibrating ever since. He showed, first, that the supply of coal was limited, and, therefore, that the consumption must one day cease; secondly, that the annual consumption was not stationary, but increasing by leaps and bounds, so that our supply of coal, and consequently our supremacy in manufactures was much nearer an end than any one had yet imagined. In fact, he only allowed a century for the coalfields of Great Britain to be exhausted. At first his computation was received with derision, but it was so cogently urged, and supported by such able authorities, that in 1866 a Royal Commission was appointed to inquire into the extent and probable duration of "Britain's Coal Cellars." Its report was issued in 1871, and still remains the chief repertory of information on the subject.

The following table shows, side by side, some of the most authoritative estimates as to the quantity of workable coal in the United Kingdom. It is generally assumed that the limit of practical mining is at 4,000 feet below the surface. This limit has never yet been passed, save by bore-holes, although it has been approached in England, France, and Belgium :—

Estimate made by	Available Coal (in Millions of Tons).	Estimated Duration of Supply.	Coal Exhausted.
		Years.	A.D.
Royal Commission (1870)	146,454	1170	3040
Sir William Armstrong (1863) ...	80,000	212	2075
W. S. Jevons (1865)..................	100,000	100	1965
Edward Hull (1864)*	83,544	800	2664
Edward Hull (1880)..................	136,025	276	2156

* Director of the Irish Geological Survey.

It will be seen that the most remarkable thing about these estimates is their divergence. At the same time they have perhaps all the more interest on that account. The work of estimating the quantity of coal beneath our soil is, at best, a kind of scientific guessing, and the most careful calculation is only a probable conjecture. Still, we may take it as fairly certain that the quantity of workable coal in the United Kingdom, at depths of less than 4,000 feet, does not exceed 150,000 millions of tons nor fall below 100,000 millions. The much more striking discrepancy between the estimates of the time that it will last is attributable to the various methods of calculating the annual consumption of the future. The Royal Commissioners and Mr. Hull, in his first calculation, took the simple plan of dividing the total quantity by the output of the year in which they wrote. That obviously gives too large an estimate, for the annual production has now increased to 189 million tons, as against 92 millions in 1864 and 110 millions in 1870.

Mr. Jevons and Mr. Hull, in his later estimate, adopted the much more scientific plan of allowing for the annual increase of the consumption. The system adopted by Mr. Jevons, however, had the serious defect of being pedantically careless of the probabilities of things. He showed that the consumption had grown during the century in a ratio increasing not merely by arithmetic but by geometrical progression: as it were, at compound and not at simple interest. He assumed that it would continue to do so until the coal was exhausted; and his conclusions are of the nature of that famous geological discovery of Mark Twain, who found that the Mississippi was shortening its course at the rate of one-and-a-third mile annually, and at once jumped to the conclusion that a million of years agone it must have been 1,333,333 miles longer than it is now, and have "stuck out over the Gulf of Mexico like a fishing-rod!" Thus Mr. Jevons concluded that, if the consumption increased at the rate it was then doing, in A.D. 1961 we should be using 2,607½ million tons of coal annually. Much virtue in *if!* A little thought shows that if coal-working continues to be about as hard as it is to-day (and Mr. Jevons's assumption rightly is that the difficulties will increase), the production of this amount of coal would involve the labour of no less than 9,620,000 miners to bring it to bank. It is hardly credible that so large a proportion of Britons—seventeen times as many as at present—will, in sixty years from now, condemn themselves to hard labour in the coal mines.

For some years after the publication of his book, however, Mr. Jevons's calculation was found to agree remarkably well with the actual increase in the annual output and consumption of coal. This, coupled with the coal famine of 1872-3, set men's minds very uneasily gazing upon the dark outlook of the future. But the famine passed away, and it was soon found that Mr. Jevons's calculations, accurate enough for a short period, went far ahead of reality when the geometric progression began to make its effect felt. The following table shows this clearly enough :—

ESTIMATED AND ACTUAL OUTPUT—1871–1895—(MILLION TONS).

Year.	Calculated by W. S. Jevons (1865).	Calculated by Professor Marshall (1878).	Actual Output.
1871	117·9	......	117·35
1881	166·3	......	154·2
1886	......	186·6	157·5
1891	234·7	......	185·5
1895	......	253·7	189·6

It is thus fairly clear that the calculations based upon an increasing consumption have all been a good deal too high. The coal, in fact, will last much longer than either Mr. Jevons or Professor Marshall supposed.

The fact is, of course, that the production of coal must always be limited by the demand for it, and that the demand will always be chiefly for home consumption. All the same, it is quite certain that the supply is limited, and that, in the course of the next four or five centuries, it will begin to give out. Then, according to Mr. Jevons and the alarmists of 1860, "Farewell, a long farewell, to all our greatness!" Happily there are some alleviating circumstances, which we shall now briefly indicate.

The first consideration that occurs is that the evil day may be considerably put off, not by such false economic expedients as the prohibition of exports or a tax on coal, which, as Mr. Jevons and Mr. Marshall have so clearly shown, would only precipitate the evils they were intended to avert, but by such real economies of consumption as are both practical and likely to be soon introduced. The chief of these strikes at the root of the whole matter, and deserves to be mentioned at some length.

From the earliest days of the coal trade there have been repeated outcries for a trustworthy system of smoke prevention. As burnt in the domestic grate or the ordinary boiler furnace, coal is only imperfectly consumed, and instead of being wholly converted into water-vapour and carbonic acid gas, both invisible and innocuous, it sends off a quantity of finely-divided dust into the atmosphere, which we know too well in its blighting and unpleasant effects under the name of smoke. If the coal is impure, to this are added poisonous gases, such as the abominable sulphur dioxide, so familiar to travellers by the Metropolitan Railway. It is unnecessary to do more than mention the numerous protests against this plague of smoke which have been called forth from the days of the London citizens of 1307 to those of Mr. Ruskin and Mr. Morris. No one doubts that the protesters have every reason on their side; great parts of England and Scotland are blighted, withered, and turned into Vales of Tophet by the belching chimneys. The notorious London fogs are mainly attributable to coal-smoke. The production of smoke is, indeed, opposed to true economy, for it bears witness to imperfect combustion of the coal; but fuel is so cheap nowadays that it is not worth the while of the offenders to lay out any money on a remedy. Many towns have taken action in their own defence, and passed municipal bye-laws for the prevention of "black smoke," as the worst of all is called. Legislative interference has also been attempted, without great success.

Many plans have been put forward for the prevention of so deleterious and wasteful a practice. The earlier ones simply related to the construction of improved furnaces, which should in all cases "consume their own smoke," as Carlyle thought human beings ought metaphorically to do. As early as 1684 we find Evelyn justly attributing London fogs to the "fuliginous steam of the sea-coale," and in 1785 the first smoke-abating invention was patented by James Watt, who did so much in other ways to increase the production of smoke in the world. In 1819 Parliament turned its attention to the question, and appointed a Select Committee "to inquire how far persons using steam engines and furnaces could erect them in a manner less prejudicial to public health and comfort." In 1843 and 1845 other Committees recommended the introduction of a Bill prohibiting the production of smoke from steam engines and factories, but added that it could not be extended to private houses. The smoke-abating Acts of 1845 and 1847 were accordingly passed. Much legislation has since been applied to factories, railways, &c., on the basis of complete consumption of the coal. This had so much effect that, although there is still room for great improvement in factories, &c., it is generally considered that domestic consumption is responsible for the worst effects of smoke in large towns. It has been calculated that every open fire burns six times as much coal as is needed to produce the heat given out. A Society has been formed for the Abatement of the Smoke Nuisance, and many kinds of stoves and grates have been devised to render the consumption of fuel more complete. Hitherto, however, the British predilection for the cheerful open fire and the smoky chimney, which goes with it, has proved too strong for the would-be reformers.

For some time those who recognise this fact have been of opinion that the only way of cleansing the towns from smoke is to effect a radical reform in the method of using coal. If it were all consumed at or near the pits, obviously the smoke and dirt would be confined to that neighbourhood, and the domestic difficulty would be done away with. The problem, then, is to send the heating power—the energy—of the coals to market instead of the coals themselves. The first way in which it was thought that this could be done was by the use of gas. The present method of burning coal in an open fire or stove really consists of two operations: first, gas is distilled from the coal, and then that gas is burnt. It was proposed to divide these operations, as the gas companies already do to some extent for the users of gas stoves. Sir William Siemens showed that certain portions of the gas derived from the distillation of coal had high heating but small illuminating power, and proposed that these should be supplied in separate mains for heating purposes. The open fire would thus be abolished. As an example of what would follow, it was mentioned that in Pittsburg the general adoption of natural gas as fuel had turned the city from one of the dirtiest of manufacturing towns to one of the cleanest.

But, somehow, this proposal has never found general favour with the domestic consumer. It may be the fault of the gas companies, but it is a fact that most of the gas stoves which they have supplied have been liable to sanitary as well as æsthetic objections. Another plan has come to the front in which it is quite possible that the solution of the smoke problem may be found. This depends on our newly-discovered ability to transmit energy by the medium of electricity.

Mr. B. H. Thwaite, the engineer who lately advocated this plan, draws a dark picture of the present state of things. "Our cities," he says, "are almost unfit to reside in, and the natural life of the Zulu or the simple life of the Italian peasant is much to be preferred to that of the English workman, with his daily grinding labour amidst the dirty surroundings of our smoke-begrimed industrial centres." His remedy is simply "to supply electric power generated in central stations built in the centres of our coal-fields to our great industrial centres, and to the metropolis itself." That is to say, the coal would be burnt on the coal-fields, being either used in steam engines or converted into gas for gas engines. The power thus developed would be converted into electricity by means of dynamos, and be thus available for supply through wires and copper cables to perform the functions of heating and warming our houses, of cooking, and of driving our machinery. Electricity has already been practically applied to the smelting of some metals, notably aluminium, and there is nothing preposterous in the supposition that one day it will also produce our iron and steel.

All this is theoretically quite possible. Its practical usefulness depends greatly on the cost of it. At first sight it seems as if the saving on the carriage of coal, which more than doubles its price in London as compared with that at the pit-head, would fully compensate for the dissipation of energy in transmission by electricity. Mr. Thwaite's calculations bear out this assumption. "The electric energy," he says, "could be sold to the different distributing companies at such a price as to enable the power to be supplied to the light and power consumer at an economic and attractive figure. . . . The cost of power to the small factory owner need not exceed £5 per 3,000 working hours of one actual horse-power of energy. In the metropolis, this energy by the present system will cost between £9 and £12. . . . While the power plant is not actually doing work there is neither serious loss nor anxiety involved. The power user is not troubled with boiler insurance or the smoke-nuisance inspector; he may simply hire the electric motors, and when he decides to remove his manufacturing appliances he has merely to return the hired motors; whereas a steam-power plant with its chimney cannot, except with a great sacrifice, be removed."

Further, the centralisation of power-producing machinery in the coal-fields would render it possible for the utmost effect to be got from all the coal used, by the adoption of the latest and best furnaces and engines, which only the large and wealthy private manufacturers are able to face. The carriage of all the waste material, 5 to 10 per cent., which is sent to London in the coal and again carted away as ash or clinker would be saved. Mr. Thwaite thinks that the coal, thus handled, would at the very lowest computation produce three times as much available energy as it does now for the same outlay. The greatest boon of all would be the incalculable improvement in the atmosphere and appearance of our great towns. It would even be possible to hope for clean trees and houses in London and Glasgow.

The chief opposition to such a scheme may be expected to come from those, like railway companies and shipowners, whose vested interests would suffer by the change.

Many attempts have been made to find some practical means of deriving electrical energy direct from the consumption of coal. So far none of them has proved successful outside the laboratory, but the resources of science are by no means exhausted, and the most recent experiments give good grounds for hope of an eventual discovery which will revolutionise the industrial world.

This leads us up to a new idea altogether, the question of substitutes for coal, which will be already familiar to those who read Mr. Branford's very able and instructive article on Electricity in the last volume of this Annual.

In order to know where to look for a substitute, we must know exactly wherein the value of coal consists. This, of course, is in its serving as a store-house, or, as the electricians say, an "accumulator" of energy. Coal, in fact, is "bottled sunshine," and sunshine is energy.

The union of coal with the oxygen of the air, which we call combustion, may be used either to evolve heat, as in our grates, or to do work, as in a steam engine, or for both purposes conjointly, as in a blast furnace. But heat, as we know, is only a form of energy, or of "the power of doing work," so that there is no real distinction between the two processes.

The great doctrine of the Conservation of Energy, on which is based the whole of modern physical science, tells us that heat, light, electricity, kinetic energy (or the ability of a moving body to do work), and chemical energy are only various manifestations of one Energy, and that with appropriate machinery we can transform any one into any other. It is also possible to collect and store up this energy, which is indestructible and exists in all parts of the universe. So stored, it is called potential energy, and is familiar to us in the "head" of a cistern of water, the coiled mainspring of a watch, an electric secondary battery, a charge of gunpowder ready to be fired. Each of these machines (as they may be called) owes its value to the fact that energy has been expended upon it in the past; we can at pleasure cause it to part with this again, and so to do work.

Coal is one of the most valuable of natural store-houses of energy. The energy which it contains is that of the sunbeams of the Carboniferous Era, whose light, heat, and chemical energy caused the atoms of carbon, hydrogen, &c., present in the air or the earth to be dissociated from oxygen and rearranged in the form of woody fibre. They are anxious to return to a union with oxygen, and when, by applying heat, we enable them to do so, they give out the energy which was expended on them so long ago. Thus it is that, as George Stephenson once said, we drive our engines by the sunbeams which fell on the earth in the Carboniferous Era and have been ever since hoarded for our use by the coal.

The actual amount of energy which is locked up in the coal can be easily determined. On an average, a pound of good coal contains 10 millions of foot-pounds of energy; that is to say, if the energy were all properly applied, a lump of coal could project itself nearly 2,000 miles above the surface of the earth, or could lift more than 2,000 times its weight to the top of Ben Nevis. A single pound of coal could do as much work as five men working in the most favourable circumstances can do in a day, or five-sixths of what a horse can do in the same time.

Of course, in practice our coal never does anything like so much work as that. In transforming heat into work, our best steam engines waste 90 per cent. or more of the energy available. Obviously, there is much room for improvement in our use of coal, and every advance made in this line is a step towards economy of our limited supply.

In using our coal, then, we are really using the energy supplied by the sun in the Carboniferous Era. What other sources of energy have we to draw upon? There are four known to science:

(1) The energy latent in other chemical combinations;
(2) The energy of the earth's heat;
(3) The energy sent us by the sun to-day;
(4) The energy of gravitation.

Of these the first is obviously as limited as that of coal, and much less readily available. Timber, petroleum, saltpetre, &c., may be burnt and so utilised to produce energy. But this source is hardly worthy of serious consideration as a substitute for coal on the large scale.

The second source of energy has not yet been investigated by practical persons. Mr. Alfred Russell Wallace, indeed, has suggested that it may soon be turned to account. In an essay published three or four years ago he observed that the condition of the earth's interior "might soon become a practical question of the highest importance, inasmuch as it might lead us to the acquisition of a new source of heat, in many ways superior to that produced by the combustion of fuel, and practically inexhaustible." Some apparatus of the nature of the thermo-electric pile, sunk in a sufficiently deep bore-hole, might conceivably supply energy without pause, though it is not easy to conceive the exact way in which the numerous difficulties are to be overcome. At present, to tap the Central Fire itself, and use the heat of the original nebula to boil our tea-kettles, is a feat beyond the boldness even of the modern engineer. In an ingenious story of Mr. James Payn the same notion is foreshadowed, but the business did not end well for the inventor, whose mortal remains, after the incautious opening of the "main plug," had to be removed with the aid of a hot iron and a little brown paper! *Absit omen.*

In practice, therefore, we are reduced to the third and fourth sources of energy. No direct method has been devised of utilising, for industrial purposes, the light, heat, and chemical energy of the sun, which yet provide us with food, clothing, warmth, and photographs, if not with life itself. Indirectly, with the aid of gravitation, they produce winds and waterfalls, whilst the gravitational attraction of the sun and moon conjointly produces the tides. It is to these that we must look for immediate substitutes for coal. Windmills and water-mills form one of the oldest sources of energy known to civilised man. Professor Tait has suggested that tidemills may with advantage be added to these. The discovery of the reversible property of the dynamo has made it possible to receive energy at convenient places from winds and waterfalls, convert it into electricity, and so transmit it to do work at any place desired. Power can be thus sent over 100 miles of wire with a loss not exceeding 25 per cent., as was proved by the Lauffen-Frankfort experiments over 112 miles.

This system is now fast developing into one of the most important departments of engineering. On the Continent and in America much more has been done than in this country, where coal is relatively cheap and abundant; but as far north as Fort William water-power has been successfully used for electric lighting, and the recent establishment of factories at Foyers is notorious. Electricity from local waterfalls is supplied in many villages and small towns of Germany at a price which enables it to compete with oil for light and steam for power. The Falls of Tivoli light Rome, and St. Petersburg is arranging to derive its light from Finnish cataracts. The most extensive experiment of all is that made with such signal success at Niagara, where 50,000 horse-power are already supplied at a price which is about one-fiftieth of that charged for electricity in this country, and it is calculated that the Fall should ultimately be capable of supplying seven millions of horse-power per hour. Thus it is by no means a visionary supposition that the Falls of Clyde may one day drive the express trains between Edinburgh and Glasgow, and Manchester derive its power, as well as its water supply, from Thirlmere. It may be said, in short, that there is no fear of the human race either perishing of cold or ceasing to manufacture so long as the tides rise and fall and water continues to flow down hill.

No article on coal mining would be complete without mentioning the wages question and the strikes which periodically paralyse this industry. But an adequate treatment of this complicated subject would alone fill our allotted space. We must, therefore, content ourselves with merely mentioning the notable strikes of the present generation—1871, 1873, 1878, 1879, 1887, 1888, and 1892—and with a brief reference to the great struggles which are still fresh in everyone's memory—the Midland strike of 1893, and the Scottish strike of 1894. Each lasted for about four months, and in both the miners endured hardships with a courage which in a better cause would have amounted to heroism. But if, like Carlyle, we are to judge causes by their results, neither of these can be thought good.

The so-called strike in the Midlands was really a lock-out. The coalmasters intimated that, as trade was bad and wages in other parts of the country were lower than those ruling in Yorkshire and the Midland counties, they were unable to compete in the market, and would be obliged to close the pits unless their men agreed to a reduction. Wages were then 40 per cent. above the 1888 standard, and the masters asked for a 25 per cent. reduction, modified afterwards to 15 per cent. on that standard, leaving them still 25 per cent. above 1888. It was claimed that, notwithstanding the reduction, the men would probably make higher weekly wages, as they would in all likelihood get full employment instead of the four, three, and sometimes even only two days' work a week which they were getting. The miners' leaders maintained, on the other hand, that it was for the masters to stop underselling one another, to the benefit of the railway and gas companies and other large consumers, at the men's expense; and gradually the theory emerged that a "living wage" ought to be the first charge on the industry. Arbitration was suggested, but refused by the leaders, and the pits were accordingly shut down on July 28th, 1893, throwing some 300,000 men idle. Public sympathy was largely with the miners, but when it was sought to fix as the living wage the 1888 standard *plus* 40 per cent., or from 6s. to 7s. a day, while unskilled labour was plentiful throughout the country at less than 20s. a week, the resistance of the coalmasters became more strenuous than ever, and was felt by most economists to be justified.

The reason is not far to seek. Much of the colliers' work requires no special training, and for none is a long apprenticeship necessary. Whenever, therefore, the miners' wages are substantially higher than those of ordinary labourers, many of the latter seek employment in the mines, outputs increase, markets become glutted, prices fall, wages appear likely to be reduced, and to prevent this the men set about "restricting" the output. This policy might be successful for a time were the leaders' dream of a truly national federation realised, and provided they were not sufficiently extravagant in their demands to throw our home markets open to foreign competition. But how long would it last? Our export coal trade would cease, and our steamers trading to coal-producing countries would find it profitable to take their supplies abroad, which would reduce, probably, by one-third the demand for British coal, and consequently for coal-miners. The workers on our railways, in our harbours, and in our ships, to whom this vast trade gives employment, would be thrown idle. There would be so much less outward freight to countries which now take our coals in exchange for their products that homeward freight would have to be increased proportionately to pay the carriers, which would raise correspondingly the price of food to our workers and of raw material to our manufacturers. Moreover, cheap coal is so important a factor in our industrial supremacy that an artificial increase of its price, particularly in the iron and steel trades, without a corresponding increase abroad, would unquestionably so handicap many of our industries as to imperil their very existence. Only a complete international federation, then, could effectually bolster up wages artificially, and, after all, even that could only be temporary, because, as pointed out by Prof. Wm. Smart, "the wages of any particular industry cannot permanently be above the wages of other industries which offer similar net advantages."

The Midland struggle ended on November 18th, 1893, in a compromise, for which the country was largely indebted to the tact of Lord Rosebery. It was agreed to reopen the pits on the 20th—wages to be at the rates in force in July (*i.e.*, 40 per cent. above 1888)—and to form a Conciliation Board, empowered to determine from time to time the rate of wages on and from February 1st, 1894. A reduction of 10 per cent. was afterwards adjusted by the Board on the understanding that no further reduction would be asked before August 1st, 1896, while the men were to be free to claim consideration by the Board of a demand for an advance, not exceeding 15 per cent., after January 1st, 1896. The agreement studiously avoided all reference to a living wage, or even to a minimum wage, and the net result of the four months' contest was the resumption of work on terms little better than might have been arranged at the beginning, *plus* the Conciliation Board. But this was at last the formal recognition of the principle, dear to the miners, that negotiations regarding labour questions ought always to be carried on by responsible representatives of both sides, with a neutral chairman, and if the Board had fulfilled the hopes entertained of it at the close of 1893 it might have been cheap even at the price of the millions lost during the struggle. But when January, 1896, arrived, the coal trade was in such a bad way that there was no thought of laying any claim for an advance of wages before the Board, and as August drew near and it was seen that wages in the Midlands (which were higher than in any other part of the country) would need to be reduced, the miners' leaders declined to allow any question of reduction to be dealt with by it. The Concilation Board accordingly expired on August 1st, 1896, and there is now nothing to show for the enormous losses the country suffered in 1893—losses which were estimated at the time at over thirty millions sterling.

The cessation of output in the Midlands in 1893 naturally caused the producing powers of other districts to be taxed to the uttermost. Prices, wages, and production rose substantially. But shortly after the general resumption of work it was found that the output was in excess of the demand, prices fell rapidly, and wages began to be reduced. In Wales this was an automatic proceeding under the Sliding Scale, a method of adjustment which has much to commend it, and in the North of England the question was settled amicably by the Boards. But in Scotland the miners, who were better organised than usual, absolutely refused to concede any reduction, and the masters being far from united among themselves, and unwilling to face contests individually, drifted on into the summer of 1894, many of them working at a loss. Gradually, however, they agreed to make common cause, and in May wages were reduced 1s. per day in the West and 12½ per cent. at the Fifeshire and Lothian collieries. Against this the miners struck with practical unanimity in June, 1894, and by the end of that month over 70,000 men were idle, and the raising of coal in Scotland had virtually ceased. The result of the strike was a foregone conclusion, of which the miners were warned by their best friends, but they held on doggedly for about the same period as their fellows in the Midlands had done. At last, hopeless and exhausted, they gave in, and work was gradually resumed in October at the wages all along offered by the masters.

The amount of loss to both sides and to the other industries of the country was relatively quite as great as it had been in England the year before, and the Scottish strike had not even the merit of working out a *modus vivendi*, as the Midland one had done in the shape of the Conciliation Board. Indeed, the Scottish coalmasters as a body embittered the situation by persistently refusing to meet and discuss terms with the men's delegates, although several of the more enlightened tried to bring about some such arrangement as was reached in England. The majority seem justified in saying now that the failure of the Midland Conciliation Board proves that they were right in holding that a Scottish one would be useless. But most of them had also declared that the men could not be trusted to carry out a Board's decisions. The whole history of the strikes of 1893 and 1894 contradicts this view. No commander could ever boast of more unswerving fidelity on the part of his troops than that of the miners to their leaders in both of these struggles. Through good and evil report the men were steadfast in pursuing the policy agreed upon by their delegates. When such unflinching discipline could be maintained in the face of the privations borne in 1893 and 1894, it cannot be doubted that the decisions of any truly representative Conciliation Board regarding wages would be loyally carried out.

Many coalmasters are coming to believe that there is nothing to prevent wages being fixed by such Boards, from time to time, for periods of six or even twelve months ahead, as is the practice in several other trades. This would make it possible for contracts to be made over the same periods in the full knowledge of what the cost of production would be, and would remove all ground for the miners' insinuation, so common at present, that the coalmasters' interest and usage is to keep up the wages standard till contracts are closed and then press for reductions. In view of this fact the break-up of the Midland Conciliation Board is a positive calamity, and the men have no small responsibility to bear who, for any mere theory, allowed such an excellent safeguard for the preservation of industrial peace to lapse.

This is no place to discuss the theory in question—the so-called "living wage"—but it may be well to point out in passing that there has been an all but universal fall in wholesale prices, averaging about 40 per cent. on the staple articles of consumption within the last twenty-five years. Many economists hold that this is almost solely the result of the "appreciation" of gold, but, be that as it may, a wage of whatever amount to-day represents a correspondingly increased purchasing power as compared with the same nominal wage twenty-five years ago, and is, therefore, equal to a corresponding advance. To put it in another way, every pound now buys 66 per cent. more of things in general than it bought in 1872, and but for the rise in house rent a wage of 20s. to-day would be as good as 33s. 4d. was then. It would thus appear that, in any case, the advocates of the living wage ought to fix their standard, not at so many pounds, shillings, and pence, the purchasing power of which is variable, but rather at the amount of money required from time to time to purchase a given quantity of the necessaries of life.

It would be wrong to leave this branch of the subject without calling attention to the enormous impetus given to the coal production of Continental countries, and particularly of France and Germany, by the strikes of the present generation in Great Britain. The table on pages 460 and 461 shows that while our own output has risen from 110 million tons in 1870 to 189 millions in 1895—an increase of 72 per cent.—that of France has risen during the same period from 13 to 27 millions, or 108 per cent., and that of Germany from 34 to 102 millions (estimated), an increase of 200 per cent.! Surely this is a lesson that he who runs may read.

The great strike of 1893 amongst the coal miners led Sir George Elliot to propose a huge scheme, the biggest that has been yet adumbrated, for the conversion of the coal industry into a gigantic monoply with a capital of some hundred and twenty millions sterling. A full account of the proposal, which has not sufficient interest to the general public for us to deal at length with it here, will be found in *The Times* for September 20th, 1893. Some plausible arguments were used to show that public benefits would result from such a scheme. But the general opinion of critics is that it was a combination of the old Limitation of the Vend with a Coalowners' Union against strikes. Philanthropy at 15 per cent. is distrusted in this country.

In the United States there is a similar and more successful tendency to the union of coal-producers in gigantic corporations, which have practical monopolies within their own districts. It is contended that this plan has advantages, especially in view of the very speculative nature of coal-mining for a small proprietor.

> Our coal industry (says a leading financial authority in England) has been from its very commencement subject to periodical gusts of speculative activity. . . . A coal-pit, when it is once opened up, has often to be kept going at a loss, simply because, were work to be stopped entirely, the pit would fall into such a condition of disrepair that it probably could never be opened again. The proprietors, therefore, work on and on, losing money year after year in the hope that some day the price of coals will rise to such a point as will enable them in a year or two's haul to recoup themselves.

In the same way those who know the coal trade thoroughly, as regards distribution, agree that it is not the routine work which is profitable, but the work done in special spurts from time to time; the first principle of the business is to hold the markets, in the sure and certain hope that however poor they may be, possibly for years together, times will come again which will amply repay long waiting.

The knowledge of all this has led to the American system, on the plea that "an enterprise backed by the combined capital of many individuals is more certain to become successful and permanent than an enterprise inaugurated by, and carried on with, the entire capital of a single individual." This is undoubtedly true in such a risky business as modern coal-mining, to which a scheme like Sir George Elliot's seems in the eyes of the coalmasters to be eminently adaptable. On the other hand, all experience tells us that a monopoly is a bad thing alike for the workmen and the consumers, whose chief hope must always be in free competition.

Perhaps the remedy will one day be found in a co-operative monopoly, where the dangers of competition will be avoided, whilst the consumer and the miner have a guarantee that the mines in which they themselves share the property will be well conducted in their interest. Co-operation on a small scale is already practised amongst the gangs of miners who share a given piece of work between them, although it is as yet only in one or two Belgian mines that they have successfully established their claim to a share in the profits of the undertaking. In this country profit sharing has been tried several times, particularly by Messrs. Briggs, but there has been no systematic attempt at co-operation in the proper sense of the term.

A summary of what has already been attempted in this direction here and elsewhere, and a well thought-out suggestion of what might be done, would form an excellent basis for a paper for a future Annual—a paper which would have very special claims on the attention of its readers.

Perhaps, again, the solution of the problem, along with the other question of strikes and lock-outs, will be found in a nationalisation of the coal mines at some future day. Coal, as one of the few absolute necessaries of life, and the mainspring of our industrial system, presents a stronger claim than most other things to Governmental control. It stands, as has been well said, not beside but above all our manufactures. A strong and increasing body of opinion favours the view that the necessaries of life—coal, water, land, railways—ought not to be subject to the power of private individuals, but if that view ultimately carries the day it will only do so by slow degrees.

It is quite on the cards that before coal is nationalised its day will be past, and the power of the tides, winds, and waterfalls, stored and transmitted as electrical energy, will be ready to replace it. Whether that be so or no, we may be optimists enough to believe that the real welfare of Great Britain is not inseparably bound up with her coal fields. These, after all, are but the environment in which the personality of a great nation has expressed itself. We need not under-estimate our natural gifts, but we must equally beware of setting too high a value upon them. "No amount of human foresight and energy," says Dr. Cunningham, "will give a country beds of coal and iron, or furnish it with a Gulf Stream. But it is important to observe that natural advantages do not make a people rich; they can at the best only make an industrious people richer." Valuable as coal is, and good servant as it has proved to us, yet the strenuous moral energy of a nation is worth more, and industry and enterprise are allies that need never depart.

Note.

The following books, &c., may be recommended to those desiring further information. The present writers wish to acknowledge their obligation to the authors, and to many others:—

"Encyclopædia Britannica," Article "Coal."
"A Treatise on Fuel." By Robert Galloway. (1880.)
"Coal: Its History and Uses." By Professors Green, Miall, Thorpe, Rücker, and Marshall. (1878.)
"On the Formation of Coal." By T. H. Huxley. Collected Essays, vol. 8. (1870.)
"The History of Coal." By the Rev. Thomas Wiltshire. (1878.)
"Earliest Records connected with the Working of Coal on the Banks of the River Tyne." By Robert L. Galloway. (1879.)
"Coal Mining in Great Britain." By Robert L. Galloway. (1882.)
"Coal and Coal Mining." By Sir Warington W. Smyth. (1890.)
"Coal and the Coal Mines." By Homer Greene. (1889.) [Specially referring to the Anthracite Mines of North America.]
"The Coal Fields of Great Britain." By Edward Hull. (1881.)
"The Coal Question." By W. Stanley Jevons. (1866.)
"Parliamentary Papers."
    Summaries of Statistics: Mines and Quarries. (Annual.)
    Reports of H.M.'s Inspectors of Mines. (Annual.)
    Annual General Report upon the Mineral Industry.
    Report of Royal Commission on Coal Dust Explosions.

Some Aspects of Continental and Colonial Co-operation.

BY THE REV. T. G. GARDINER.

INSULAR prejudice and the arrogance of self-satisfaction are said to be among the least attractive features of the British character. To a certain extent the impeachment must be admitted; and the prejudice of the average Co-operator is manifested in the indifference with which he has hitherto regarded the course of the movement in countries other than his own. Although in moments of enthusiasm he cheers a more or less eloquent description of the peace and happiness which will come, when the federation of the world shall have passed from the domain of poetry into that of practical politics, he has hitherto remained in ignorance as to what Co-operation is doing in other quarters of the globe. No doubt the founders of the International Alliance are attempting to replace apathy by active interest, but even if this Association prove more successful than its predecessors in similar fields, International Congresses can only result in a very partial knowledge. The difficulties of variant languages no less than those of different business methods, the difficulties of realising common interests no less than different conditions of life in the various nations where Co-operation is practised, must make progress by means of Congresses so slow as to be almost beyond the horizon of the practical man's life.

None the less, International Co-operation is in the air. The reasonableness of the idea appeals to practical common sense; enlightened self-interest favours the proposal; the desire to move in the direction of great ideals urges the Co-operator forward. Theoretically, at any rate, he is convinced that new possibilities connoted by the words International Co-operation have risen over the hills of time.

But, unexpected, strange as it may be, when we turn from the region of theory to that of fact, the Co-operative movement on the Continent and in the Colonies has already acquired a practical as well as an academic interest; and in certain directions business relations have already been established, notably by the combined efforts of the English and Scottish Wholesale Societies. While British Co-operators, as a whole, intent on their own business, have been working out their own destiny in grim silence, without regard to the enterprises of others, the seed of the Co-operative idea has taken root, has been growing, and in the last decade of the nineteenth century some of the fruit is being gathered.

To give a complete description of this growth is altogether impossible, having regard to the limits of this article. We propose, therefore, to choose particularly some Countries and Colonies wherein the results of obedience to Co-operative principles seem instructive to British Co-operators, and to suggest reasons why similar enterprises should be attempted at home.

We will first consider Co-operative Agriculture in Denmark, and for this reason: those who follow the tendency of public opinion in the Co-operative world see clearly enough that Co-operative methods are about to be applied to agriculture in England on a scale unprecedented in the history of the movement. Co-operative Farms have no doubt been established at frequent intervals by the benevolence of "good landlords"; but, as a rule, these efforts have not met with the reward that their founders deserved. While at the present time, on the one hand, land is cheap—and the statement is often heard that its price has nearly touched bottom—on the other, Co-operative Societies are in many instances encumbered with surplus capital, a difficulty which must increase so long as their trade continues to grow, and the general trade of the country is good.

The most important development of Co-operative enterprise in Denmark is the establishment of Co-operative Dairies. We have no very recent figures available, but in 1893 there were between 1,000 and 1,100 Co-operative Dairies in existence, treating the milk from 26,000 to 30,000 cows.

The system is already familiar, and a detailed description is not necessary. The money for the factory is provided by the members in proportion to the number of cows which each possesses; the milk is collected daily at the cost of the Association; and each member is obliged to furnish all that his cows yield, except what is required for personal consumption. The milk is paid for according to the quantity of butter it contains; the skim milk is returned to the sender, or used by the Association for pig feeding, &c. Elaborate rules are laid down for winter feeding, and no pains are spared by the directors to improve the quality of the milk. Each consignment is most carefully inspected, and if any fault is discovered it is rejected. Mr. John Andrew, the buyer of the English and Scottish Wholesale Societies, has testified to the purity of the Danish butter, and adds the significant fact that the export of margarine made in Denmark is so small that no trustworthy information can be obtained.

Butter making, of course, requires knowledge and skill, and so determined are the Danes to keep abreast of the requirements of the British markets, that schools for the instruction of dairy hands have been established. At Laderlund, for example, a five months' course is given in mechanics, physics, chemistry, the anatomy of domestic animals, practical testing of milk, &c. None are admitted to the class save those who have had practical experience of dairy work. So convinced is the Danish Government of the importance of this industry, that not only does it provide experts to assist the butter makers by advice and suggestion, but it also maintains an expert in England, whose chief duty it is to promote the trade by every legitimate means in his power. Finally, Butter Shows are organised by the Agricultural Department in different districts, to stimulate honourable rivalry between the various producing Associations.

Another feature of the development of the Agricultural industry in Denmark has been the rapid growth of an export trade in bacon and hams. Prior to 1887–8 the annual consignment of these products from Danish ports never exceeded 300,000 cwts. In 1893–4 they reached over 800,000 cwts. The increase has resulted from the establishment of Co-operative Bacon Factories; for in 1887 a few farmers in the district of Horsens, emboldened by the success of Co-operative Dairies, established one of these institutions; and, as in the same year the German ports were closed to live swine, bacon factories sprang up all over the country. The capital was raised on the joint credit of the farmers, and the administration vested in a Council elected by the shareholders. The regulations of the several factories are similar in principle. The members of the Association are bound to deliver all their saleable swine to the factory for seven years, excepting boars, sows in farrow, young pigs under 56lbs., and pigs sold by a farmer to his labourers. A corresponding obligation rests on the Association to purchase all the healthy swine consigned by a member to the factory. The Association defrays the expense of conveyance from the nearest railway station to the factory, all other charges being paid by the consignors. On arrival at the factory, the pigs are divided into several classes by the manager, who advises the Council as to their price. In the newer establishments dead weight is paid for. In some Associations, rules are in force as to the methods of feeding; and there is a tendency to greater strictness in this particular, with the object of securing, as far as possible, uniformity of quality. At the close of the year profits are divided according to the weight of pigs delivered, after working expenses, depreciation, reserve fund, &c., have been provided for.

In some of these factories it is the practice to elect as members of the Council representatives of the members residing in different parishes, so as to develop local interest. For instance, in the Esbjerg factory's rules it is provided that any parish with ten members may be represented by a delegate.

Steps have been taken to grow specially for the British market. Experience proves that the best breeds for the purpose are the large and medium white Yorkshire; and the best herds are constantly recruited by the purchase of breeding swine from England. We give some figures which indicate the growth of the trade in the five years, 1890–1894—years of almost unparalleled depression in British agriculture, during which the Danes, having imported English stock, bred and exported the products to English markets as follows:—

	Values. £	Quantities. Cwts.
1890	1,246,385	470,047
1891	1,590,349	583,408
1892	1,931,396	675,882
1893	2,171,299	719,124
1894	2,189,828	766,828

The space at our disposal does not allow us to quote in full the Articles of Association of one of these Co-operative Dairies or Factories. Those interested in the question will find the Articles set forth at length on page 9 of the Board of Agriculture's Report, 1892, dealing with dairy farming in Denmark, Sweden, and Holland.

In Sweden a similar system of Co-operative Dairies for the manufacture of butter and cheese obtains. The method adopted (originally borrowed from Denmark) has entirely superseded the older system of individual farmers manufacturing these commodities.

To ensure success the following conditions must be observed: sufficient capital to enable the Association to pay ready money to the farmers, to provide adequate buildings and appliances, and to hold stocks of cheese until the favourable opportunity for sale arrives. It is also of the first importance to pay, not for the quantity of milk, but for the quantity of cream which it contains; the milk should be fetched from the producers, so as to ensure control over the condition in which it is received. But it should not be forgotten how much these dairies are indebted to the Agricultural Colleges, especially those of Ultuna and Olnarp, where the teachers are distinguished men of high scientific acquirements. The State also provides by means of scholarships for the scientific training of dairymaids. In South-Western Sweden it is admitted that the products of the Co-operative Dairies are superior to those which come from private establishments; for the producer is alive to the fact that the more he improves the quality of the milk, the more will be his profits, both immediate and deferred. The landowner as well as the peasant, the large as well as the small farmer, may become members of the Association. The dairy appliances seem to have reached a higher pitch of perfection even than in Denmark; the Euther Extractor, the Alpha Separator, and the Lactocrit are said to be Swedish inventions; and as a result of these improvements the keeping qualities of the Swedish butter are said to be superior to those of its great competitor the Danish; and Swedish butter is being imported into England under its true name. Copies of rules of two existing Co-operative Dairies are to be found in the Board of Agriculture's Report of 1892 (to which we have already alluded), on page 41.

Turning to the German Empire, we find that the system of Co-operative Dairies is being rapidly extended. In 1882 there were 180 dairies, private or co-operative. In ten years the total number had grown to 2,673, of which 1,020 are worked by co-operative associations of farmers. In North Germany they are chiefly engaged with the production of butter; in South Germany they are devoted to the production of cheese. The system adopted is similar to that pursued in Denmark and Sweden, but considerable difficulty is experienced in finding competent managers. The technical training available seems to be less highly developed than in Denmark. To remedy this—for the German Co-operator regards the Dane as his most dangerous competitor—the Government has established Dairy Schools and Experimental Dairy Stations in various parts of the country, where scientific and practical training is provided for male and female students. A careful study of the present position of the butter and cheese making industry in Germany points to the importance of scientific and technical training to meet the demands of foreign markets.

When we turn to France we find fewer indications of the growth of the Co-operative movement than we should have been led to expect. It is true that profit-sharing undoubtedly makes progress, and this principle is constantly being extended to fresh firms, but Co-operation as a growth upwards springing from the labouring and artisan classes is, speaking relatively, scarcely perceptible. This, no doubt, is partially due to the absence of increase in the numbers of the population; partly to the fact that there is a good deal of direct supply between producers and retailers; and partly to the fact that the local markets still hold a commanding position, so that small farmers and agriculturists are satisfied with the profits that remain after paying the salesman for disposing of their produce. We have been unable to learn that any system of disposing co-operatively of poultry and eggs has yet been established: but this probably is only a question of time; for the Associations for the Mutual Protection of Agricultural Interests in France have made great strides in recent years, although it is suggested that the reports published by these syndicates are somewhat Utopian. The general object of these Associations is:—

1. To facilitate the creation of Syndicates.

2. To establish a central staff in Paris for the purpose of supplying information, acting as agent, and centralising demands for machines, manures, seeds, &c., so that subscribers may be able to procure what they require at wholesale prices.

3. To make known the best methods of agriculture, and to spread the most reliable professional views and economic doctrines. All connected with the land, of whatever rank or position, are eligible for membership.

As an illustration of the work of these syndicates, we may point to the bi-weekly sales at La Villette. These have been instituted for the reception and disposal of fat stock for the Paris market, so that small producers' interests may be considered, and they may not be victims of "rings" amongst buyers.

As has been stated, these syndicates are of recent growth, but they have already done much to bring hope to the distressed agriculturist, and there is reason to believe that they will be of great benefit in the future.

In the Department of Aisne a Co-operative Dairy has been established on the Danish model, which supplies direct the first-class trade of Paris. The society receives the milk of 500 cows, and the number is likely to increase.

In the district of Charente Inferieure, to take another illustration of the work of these Associations, there are nearly 13,000 members, and several important improvements have been introduced. In 1888 a Co-operative Society was established for the sole benefit of the members of the syndicate; the produce of the small farmers is purchased, and it supplies him with what he requires at the lowest cost. It numbers thirty branches, and has already reduced the retail price of such articles as the farmer requires some 25 per cent. Constant attention is given to the development of new markets for the sale of the members' produce.

In the hilly districts of Savoy and Franche Comté, to describe one more typical Association, the small holders sell, and have sold for nearly three centuries, their milk to the fruitières or cheese makers. The Association manipulates the milk in common, the net profits being distributed in proportion to the quantity supplied. Each of these Associations deals with the milk of 50 to 200 cows, and the cheeses are sold off twice a year.

When we cross the Alps into Italy we enter a country where the Co-operative movement has made considerable progress, and there is reason to believe that its ultimate triumph is assured. All classes of the community seem to have realised the benefits which may be derived from federating the Co-operative Societies of the same district, and gradually extending the sphere of their operations to larger areas. The Central Committee of the Co-operative Societies has its head-quarters at Milan. The organ of the Federation, *La Co-operazione Italiana*, is published twice a month, and its pages contain much instructive information for British Co-operators.

According to the latest available figures, there are over 3,000 Italian Co-operative Societies in existence at present; of these, about 1,000 are Co-operative Dairies; 500 Popular Rural Banks; 500 Co-operative Stores; in the remainder are included the productive Associations (which are well known in this country), associations of day labourers, industrial, building, and insurance societies, agricultural syndicates analogous to those of France, and the like.

But the service which Co-operation renders to Italy cannot be estimated without realising the importance of the Rural Banks, for by their means the condition of the peasant will be permanently improved.

In the provinces of Padua, Venetia, and Vicenza the rent of the smaller holdings is paid partly in cash and partly in kind, the labour being provided by the tenants and their families. After the union of Venetia with Italy times were prosperous, and rent increased. But from 1882, when the agricultural crisis came, the smaller farmers were compelled to sell their cattle to pay the rent, and they had not capital available to restock their holdings. They accordingly had recourse to the usurers, who charged normally 100 per cent. interest, and on certain classes of security (*e.g.*, Indian Corn) nearly 200 per cent. Let us take one illustration. Goose breeding is a long-established industry in these districts. The peasant receives from the money lender 50 lire, or £2, for the purchase of fifty goslings; when, in the course of six months, the geese are fattened, the peasant not only repays the loan in cash, but also gives to the usurer one fat goose, worth 4s., out of every ten, *i.e.*, he pays interest at the rate of 100 per cent.

To meet such conditions Signor Wollemborg, the Editor of *La Co-operazione Rurale*, has established Rural Banks; the capital is borrowed from Savings Banks, and all the members of the Rural Bank are jointly and severally responsible for the loans. Thus each separate borrower is kept in hand, for members only can receive loans.

The rate of interest is fixed in general meeting after the members have decided that the loan is to be made. They meet twice a month for business; the books are kept in the simplest possible form by some friend of the movement, the communal secretary or parish priest.

But other Labour Societies are coming into existence; in some instances they do well, but as a rule they suffer from want of technical management and administrative ability. A law has recently been enacted whereby Co-operative Associations may tender for public works without furnishing security; but some of these societies are Co-operative only in name, for contractors have formed "societies," so called, in order to avoid depositing security. But there are many honourable exceptions—notably the greater part of the Romagnole Societies, those belonging to Emilia, and the Society of Roman Masons, &c.

Efforts are being made to introduce into the Rici districts of Northern Italy Co-operative Associations of Labourers. By the system which has hitherto prevailed the labourers are badly paid, the contractor or ganger reaping a considerable profit in addition to the wages of superintendence. Many of the larger landed proprietors are employing these Associations instead of the gangs provided by the contractor, and, with the support of the King, there seems some reasonable prospect of success, notably in the case of the Ravenna and Rovigo. Inquiries have also been instituted to see how far the Co-operative principle may be applied to public works, the colonisation of waste lands, and the like. But at present we have failed to discover that any practical steps have been taken in this direction by way of experiment.

The success which has attended the Co-operative Society of Masons of Milan is well known. The Municipality has employed this Association to carry out certain works in connection with the Communal Cemetery. The quality of the work, exactitude, and fidelity have left nothing to be desired, and similar societies have been organised at Mantua and Bologna; but the latter society suffers from difficulties with which British Co-operators are familiar—lack of capital, business experience, and the like. Co-operative Stores among the middle classes continue to make progress, but among the industrial classes considerable difficulties are experienced owing to internal dissensions and lack of appreciation of the society's true interests. But, having regard to the increasing hold that the Co-operative principle has on the population, time will, no doubt, remove these obstacles to progress.

Agricultural syndicates are being organised on lines similar to those on which French syndicates have been established. The differences are not of sufficient importance to require detailed description in this paper. In the Foreign Office Miscellaneous Series of 1893, No. 276, a full description will be found on page 43.

For the last thirty-six years successive Ministers of Agriculture have endeavoured to establish Rural Bakeries in the interests of the peasants; but success has not yet been attained, in spite of the well-intentioned efforts of landed proprietors, subsidies from the Commune, the Milan Savings Bank, &c. Other Associations have failed, apparently, because the labourers are not yet prepared to take the matter into their own hands, and because (as it would appear) some Italian workmen have yet to learn that patronage, however well intentioned, cannot help a democracy to work out its own salvation: it either leans too much on external assistance, or the most capable men in the ranks of labour cannot, for various reasons, work in harmony with kindly people drawn from a different class, and who are, therefore, ignorant of the conditions of life among those whom the benevolent patron desires to benefit.

Turning to Austria and Hungary, it is satisfactory to note that Co-operative Societies are making steady headway. The Government, alarmed at the spread of socialistic theory, have recently removed from the Statute Book those legal enactments which hindered the progress of industrial co-operation in production, distribution, the buying and selling of land, credit associations, and the like. Distributive stores (organised on the basis of cost price, *plus* working expenses) have made considerable progress, and in some cases the roll of members contains more than 20,000 names. Societies organised on the Rochdale system are springing into existence in industrial centres. But, although the principle of profit sharing is generally enforced, that democratic control, which British Co-operators regard as essential, is rigidly excluded; the masters extend a kind of patriarchal supervision, and, as might be expected, these institutions meet with unequal success.

Passing to productive Associations, their progress is slow. In 1892 there were over 200 of these Associations in Austria, but more than half were to be found in Vienna. The trades for which they exist are those supported by the middle and upper classes, piano makers, bronze workers, &c., but some Co-operative Bakeries are coming into existence.

Mention should also be made of the "Associations of Credit," which are in possession of great and growing funds. They have been organised to set small tradesmen and artisans free from the usurers and from the burden of private debt. The establishment of co-operative warehouses and factories where motor power is required is also included in the sphere of this society's operations. Its further developments will be watched with attention, for, obviously, it has within it some features of considerable interest. Speaking generally, the Co-operative movement in Austria seems to touch the middle classes of society to a greater extent than in this country.

We must now turn to the British Colonies to observe what efforts are being made to apply Co-operative principles to agricultural or commercial enterprise. Butter has always held an important position among the productions of the New Zealand farmer, but made by different persons in different ways it could not hold its own against the Danish butter in the English market. Efforts have been made to produce butter of uniform quality in butter factories organised, *mutatis mutandis*, on the Danish model; for it is held that New Zealand might easily become the Denmark of the South, even if she does not succeed in competing successfully in British markets. Victory or defeat depends on the introduction of scientific methods. The North Island of New Zealand bids fair to become the great dairying district; factories have sprung up in all directions, for the humidity of its climate, no less than the luxuriance of its pasturage, attracts a thrifty type of farmer.

The use of the separator is, of course, essential: there are 50 per cent. more returns from milk treated in this way than in the old-fashioned method. An automatic milking machine has been recently introduced, from which satisfactory results are anticipated.

The nominal capital of Co-operative Dairy Companies ranges from £1,000 to £3,000, usually issued in £1 shares. The business is first charged with interest at 5 or 6 per cent., before any bonus is paid on the milk supply. The approximate cost is stated to be as follows:—A cheese factory, 800 to 1,000 cows capacity, £1,200; 600 to 700 cows capacity, £900. Butter factories, 800 to 1,000 cows capacity, with mechanical refrigerator, £1,500; 600 to 800 cows capacity, with mechanical refrigerator, £1,250. The latest available statistics are as follow:—

	Total Export Butter. Cwt.	Butter Exported to United Kingdom. Cwt.
1885	24,923	273
1890	34,816	26,579
1894	60,771	58,845

	Total Export of Cheese. Cwt.		Cheese Exported to United Kingdom. Cwt.
1885	15,245	......	272¾
1890	40,451	......	31,043
1894	55,655	......	54,540

It is estimated that the prime cost of the seventy to eighty cheese and butter factories now in existence amounts to nearly £100,000.

There is one other adaptation of the Co-operative system which is being attempted in New Zealand. A number of Co-operative homesteads have been started; the advantages of this system are that a whole block of land not more than 11,000 or less than 1,000 acres can be taken up forthwith. But these Associations are at present in the formation stage, and it would be unreasonable to expect at present results capable of tabulation.

But when we cross to the Continent of Australia we find that at present Co-operative principles have not yet received the serious attention of the community. The greatest success is that recorded by the Victorian Butter Factories; these were established with the assistance of Government in 1888. In 1892, 46,000 cwt. were exported to England. The Government provided competent travelling lecturers (with the necessary appliances) to instruct the farmers in the best methods, and, in addition, gave and continue to give a bonus on every pound exported. In 1892 there were 360 of these factories in existence.

At this point we must abandon the study of Continental and Colonial Co-operation on account of the limitations of space. There are, however, two or three observations which we take leave to make. First, it will have been noticed that we have confined ourselves mainly to Co-operative Agriculture, and have purposely refrained from describing the operations of many societies of considerable interest to English traders. But, in truth, concentration on a single branch of so great a subject seemed essential.

Again, we chose Co-operative Agriculture because, to judge from the Woolwich Congress, the minds of Co-operators are set on this subject. Just as in the case of Ireland, some four years ago, every faithful Co-operator was eager that the principles in which he believed should be put to the practical test of experience, so in these days the same men are equally anxious that to the depressed agriculture of England should be applied the practical sympathy and assistance of the movement. As a whole the depopulation of rural England is a subject of prime interest and importance to us as citizens as well as Co-operators. Our boast is—and we do not hesitate to reiterate our creed with an unflinching faith—that our principles, if properly and completely applied, would bring about a new social order.

But we turn to practical considerations; the following arguments, we submit, tend to prove that the present is a favourable opportunity for a forward step.

1. It is said by those qualified to speak that the price of agricultural land has already touched bottom—and will probably rise.

2. The Co-operative Societies are in an unique position for making the experiment of Co-operative Dairy Farming on the Danish model. They have an assured market; from their constitution they are in direct contact with their customers, with whose tastes and requirements they are familiar to an extent impossible to an outside organisation. The same individuals should produce and consume.

3. In many societies the use of surplus capital is becoming a serious question. It would be difficult to find a safer outlet than the establishment of Co-operative Cheese and Butter Factories, if sufficient care is taken in the following points:—

(*a*). The selection of suitable localities.

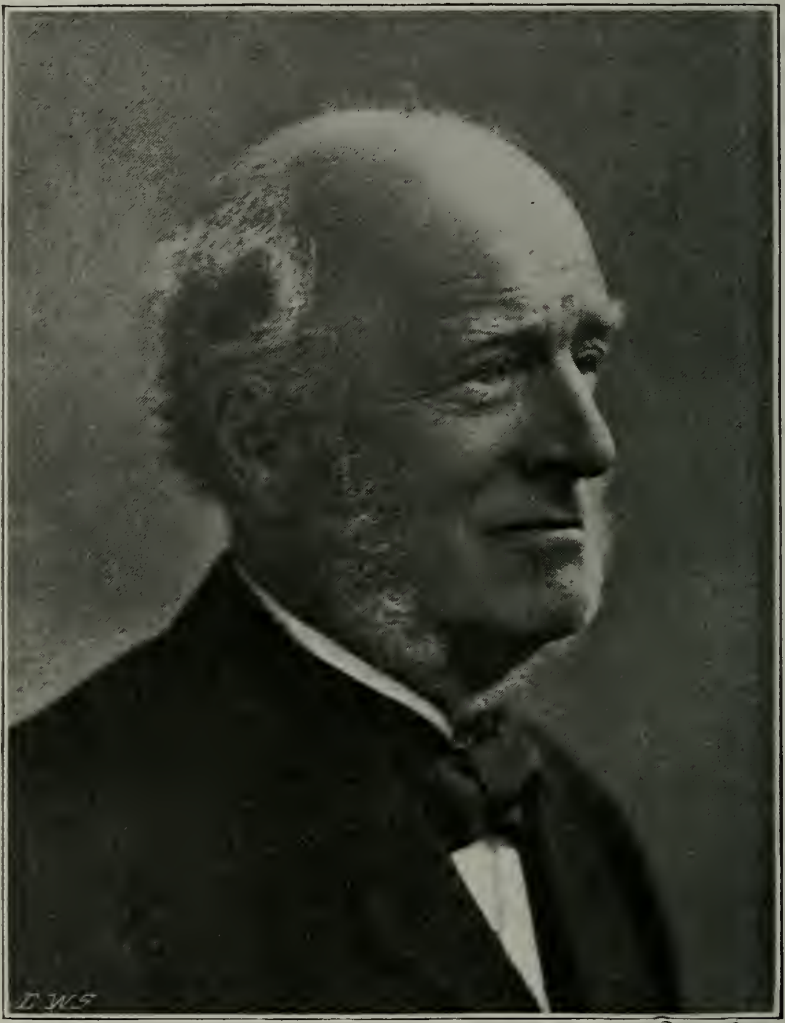
(*b*). Suitable technical instruction, which might in some cases be provided at the cost of Educational Funds, for the technical and scientific skill of the Danes appears to have been an essential element in their phenomenal success.

4. Those great monopolies, the railway companies, are more easily dealt with by great associations than is possible for single individuals.

5. *Primâ facie*, the climate of England and Scotland is as suitable as, if not more suitable than, that of Denmark or Sweden, and it is well known that the Danish cattle are improved by the crossing of the best English and Scotch blood.

6. The establishment of butter and cheese factories would lead to Co-operative Bacon Factories, when at once the movement would be brought into touch with the labourers as a class. The extension of the allotment system is only a question of time. It is notorious that landowners receive three, four, and five times more rent for allotments than for ordinary agricultural land, and they are realising that labourers may become the most desirable tenants—if improved methods of communication are provided by means of light railways, motor cars, and even of bicycles.

Such experiments might be multiplied almost indefinitely; but enough has been said to show the necessity for inquiry, for consideration, for action. Let the Co-operative organisations once more extend their borders, enlarge their interests so as to realise their hopes, in order that the movement as a whole may be possessed and purified by a worthy, an ennobling ambition.



THE LATE JUDGE HUGHES.

The late Judge Hughes.

WHEN the manly, kindly spirit of Thomas Hughes passed from earth, the Co-operative movement lost one of its most ardent advocates.

For nearly fifty years he had, with tongue and pen, thrown a great personal influence into every attempt made by earnest men to elevate and educate the teeming crowds constituting the working classes of England—the great strata of labour upon which is constructed the constitution of the nation, and upon whose condition depends, in no small measure, the happiness and welfare of the country.

It was considered, then, by the Board of the Directors of the Co-operative Wholesale Society, under whose auspices this Annual is issued, that its publication in 1897 would be incomplete without a brief memoir of this stalwart Englishman.

Thomas Hughes was the second son of Mr. John Hughes, of Donnington Priory, Berks, and was born at Uffington, October 20th, 1823.

Upon his attainment of ten years of age he was sent to Rugby, and to that event do we owe—and the debt is great—"Tom Brown's Schooldays," and through this work, with its tone of sturdy vigour and healthy manliness, is the author's name revered by thousands of the English youth.

Upon leaving Rugby he entered Oriel College, Oxford, and took his B.A. degree in 1845.

Amongst his other literary works are "The Scouring of the White Horse," "A Layman's Faith," "The Cause of Freedom," "Life of Alfred the Great," "Rugby Tennessee," "Memoir of a Brother" (George C. Hughes), "Memoir of Daniel Macmillan," "Gone to Texas," "Life of Bishop Fraser," and "Life of Livingstone." He wrote prefaces to Kingsley's "Alton Locke" and Whitman's Poems; edited J. R. Lowell's "Biglow Papers," Comte de Paris's "Trade Unions of England," and Maurice's "Friendship of Books."

Mr. G. J. Holyoake tells us in the *Co-operative News* of April 4th, 1896, that in 1865 he urged the necessity of Co-operation being represented in Parliament upon Mr. Hughes, and induced him to accept the candidature for Lambeth, which he represented from 1865 to 1868.

His aspirations to parliamentary honours were supported by Ruskin, not because he agreed with him, but "because I knew they (Hughes and Mill) had a principle of opinions—that they were honest, thoughtful, and benevolent, and far worthier to be in Parliament (even though it might be in opposition to many causes I had at heart) than any other candidates I know." In 1868 Mr. Hughes was elected as the Member for Frome, which he continued to represent until the dissolution of 1874, and since then he never again entered the parliamentary arena.

He was called to the Bar in 1848, became Queen's Counsel in 1869, and in 1882 was appointed Judge of No. 9 County Court Circuit, in Cheshire, and built himself a beautiful house named Uffington House in memory of his birthplace.

His location in this district intensified the admiration with which he was already regarded as speaker and teacher, and his hearty and straightforward disposition won him large numbers of friends amongst northern Co-operators.

It is with regard to Mr. Hughes's relation to social questions that we are chiefly interested in the present sketch, and we give, in his own words, the reasons which constrained him to ally himself with a cause that, in those days, amongst the class to which he belonged, had little or no sympathy. He said:—

> Forty years ago I was a youth fresh from Oxford. You may imagine the effect upon me of a plunge into one of the worst quarters of London (Lincoln's Inn), peopled by thieves, beggars, and slop workers. I saw that the competitive struggle of life had brought them to this pass, and I almost became a physical force Chartist. Mr. Maurice (chaplain of Lincoln's Inn) gathered a number of young students around him, and within a year I had become a Christian Socialist, and was hard at work establishing associations among the London slop workers.

The above extract is from a speech delivered by Mr. Hughes on the occasion of the presentation of the Hughes Scholarship, which was founded by Co-operators in recognition of the yeoman service he had rendered them.

The first scholar was the son of a working member of a society, and Mr. Hughes expressed his pleasure that the Oriel College was to be the first to cordially welcome the first scholar from the ranks of labour.

How appropriate was this scheme to the democratic tendencies of Mr. Hughes may be seen from the following extract from one of his books:—

> What does democracy mean to us English? Simply an equal chance for all; a fair field for the best men, a clearance out of sham governors and all unjust privileges in every department of human affairs. The people will have compulsory education, organisation of labour, and utilisation of public lands, and other reforms of an equally decided character. All the signs of our time

tell us that the day of earthly kings has gone by, and the advent to power of the great body of the people, those who live by manual labour, is at hand. The Co-operative movement and the trade societies should be enough to prove this. In another generation the sovereignty of the country will virtually pass into their hands. Upon their patriotism and good sense the fortunes of the kingdom, of which Alfred laid the deep foundations a thousand years ago, will depend.

These were the beliefs of a man who was no superficial observer of human nature, but of one who had personally come into contact with the workers, and interpreted in this forcible language the smouldering fires of restrained action that, guided wisely and firmly, should procure for those workers a freedom worthy of the name.

At the first congress of the present series, held at London in 1869, Mr. Hughes was president, and delivered the inaugural address, and also at the fourth congress at Bolton he discharged similar offices, and presided at the fifth and seventh congresses on the third and second days respectively.

Between Mr. Hughes and Mr. E. V. Neale there existed a lifelong friendship, and together they collaborated in the congenial labour of editing the "Manual of Co-operation," in which the subject is viewed from historical, moral, and economical standpoints. It is a work of great research, and is regarded as a Co-operative classic. During the American War Mr. Hughes's sympathies were strongly enlisted by the enthusiastic championship of Liberty manifested by the Northern States, and he naturally took a warm interest in the efforts made by the Union and Emancipation Society to educate the public mind of this country with regard to the momentous issues at stake.

Mr. Hughes's opinions as to the practical methods of carrying out Co-operative ideals were sometimes widely divergent from those held by other men of long and extensive experience in the movement, but although as an opponent he was uncompromising in his attitude, and unflinching in maintenance of his position, his treatment of those who did not see eye to eye with him was invariably marked with the toleration and courtesy that ensured his memory being always regarded as that of an English gentleman.

SALES OF CIVIL SERVICE SUPPLY STORES.

	Civil Service Supply.	Civil Service (Haymarket).	New Civil Service.
	£	£	£
1871	625,305	....	....
1872	712,399	....	....
1873	819,428	....	....
1874	896,094	....	....
1875	925,332	....	....
1876	983,545	....	....
1877	946,780	....	....
1878	1,384,042	....	....
1879	1,474,923	....	....
1880	1,420,619	514,399	....
1881	1,488,507	520,155	139,367
1882	1,603,670	497,650	....
1883	1,682,655	329,805	149,478
1884	1,691,455	481,560	148,975
1885	1,758,648	468,992	150,948
1886	1,743,306	465,096	150,383
1887	1,732,483	469,456	155,000
1888	1,763,814	473,817	158,028
1889	1,775,500	481,120	158,317
1890	1,789,397	481,352	164,160
1891	1,817,779	475,066	178,761
1892	1,749,384	471,133	168,582
1893	1,675,848	448,171	158,313
1894	1,663,970	439,283	154,541
1895	1,445,923	442,942	149,185

Above we give the Sales of the Civil Service Supply Stores as distinct from the ordinary distributive societies appearing in the previous tables.

CO-OPERATIVE SOCIETIES IN THE UNITED KINGDOM.

STATISTICS SHOWING THE POSITION AND PROGRESS OF THE CO-OPERATIVE MOVEMENT FROM 1862 TO 1894.

WE again place before our readers a synopsis of the Trade of Co-operative Societies in the United Kingdom. The tables have been brought up to date on the basis of the Annual Returns by Societies to the Registrar of Friendly Societies, and corrected by the more recent returns to the Co-operative Union.

The tables refer to the United Kingdom, England and Wales, Scotland, and Ireland, and give the comparison between the figures of 1894 and those of ten years ago. We have also inserted below the figures relating to profits devoted to Education.

CO-OPERATION IN THE UNITED KINGDOM DURING 1884 AND 1894.

		1884.	**1894.**	INCREASE PER CENT.
Societies (making returns)	No.	1,400	1,930	37
Members	No.	797,950	1,373,004	71
Capital (share and loan)	£	10,477,024	19,820,745	89
Sales	£	30,424,101	52,110,800	71
Profits	£	2,723,794	4,928,838	80
Profits devoted to Education	£	19,154	36,553	90

CO-OPERATION IN ENGLAND AND WALES DURING 1884 AND 1894.

		1884.	**1894.**	INCREASE PER CENT.
Societies (making returns)	No.	1,079	1,525	41
Members	No.	672,780	1,139,535	69
Capital (share and loan)	£	9,238,693	16,189,717	75
Sales	£	25,600,250	41,731,223	63
Profits	£	2,237,210	3,841,723	71
Profits devoted to Education	£	18,062	32,503	79

CO-OPERATION IN SCOTLAND DURING 1884 AND 1894.

		1884.	**1894.**	INCREASE PER CENT.
Societies (making returns)	No.	312	355	13
Members	No.	124,065	229,409	84
Capital (share and loan)	£	1,228,891	3,596,516	192
Sales	£	4,791,862	10,115,126	111
Profits	£	484,893	1,081,304	123
Profits devoted to Education	£	1,092	4,050	270

CO-OPERATION IN IRELAND DURING 1884 AND 1894.

		1884.	**1894.**
Societies	No.	9	50
Members	No.	1,105	4,060
Capital (share and loan)	£	9,440	34,512
Sales	£	31,989	264,451
Profits	£	1,691	5,811

CO-OPERATIVE SOCIETIES,

TABLE (1).—General Summary *of* Returns

(Compiled from Official

Year.	No. of Societies			Number of Members.	Capital at End of Year.		Sales.	Net Profit.
	Registered in the Year.	Not Making Returns.	Making Returns.		Share.	Loan.		
					£	£	£	£
1862	*a*454	*f*68	332	90,341	428.376	54,499	2,333,523	165,562
1863	51	73	381	111,163	579,902	76,738	2,673.778	216,005
1864	146	110	394	*b*129,429	684,182	89,122	2,836,606	224,460
1865	101	182	403	*b*124,659	819,367	107,263	3,373,847	279,226
1866	163	240	441	*b*144,072	1,046,310	118,023	4,462,676	372,307
1867	137	192	577	171,897	1.475.199	136,734	6,001.153	398,578
1868	190	93	673	211,781	1,711,643	177,706	7,122,360	424,420
1869	65	133	754	229,861	1,816,672	179,054	7,353,363	438,101
1870	67	153	748	248,108	2,035,626	197,029	8,201,685	553,435
1871	56	235	746	262,188	2,305,951	215,453	9,463,771	666,399
1872	141	113	935	330,550	2,969,573	371,541	13,012,120	936,715
1873	226	138	983	387,765	3,581,405	496,830	15,639,714	1,110,658
1874	130	232	1,031	412,733	3,905,093	587,342	16,374,053	1,228,038
1875	117	285	1,170	480,076	4,403,547	849,990	18,499,901	1,429,090
1876	82	177	1,167	508,067	5,141,390	919,772	19,921,054	1,743,980
1877	67	246	1,148	529,081	5,445,449	1,073,275	21,390,447	1,924.551
1878	52	121	1,185	560,993	5,647,443	1,145,717	21,402,219	1,837,660
1879	52	146	1,151	572,621	5,755,522	1,496,343	20,382,772	1,857,790
1880	69	100	1,183	604,063	6,232,093	1,341,290	23,248,314	*c*1,868,599
1881	66	..	1,240	643,617	6,940,173	1,483,583	24,945,063	1,981,109
1882	67	115	1,288	687,158	7,591,241	1,622.431	27,541,212	2,155,398
1883	55	170	1,291	729,957	7,921,356	1,577,086	29,336,028	2,434,996
1884	78	63	1,400	797.950	8,646,188	1,830,836	30,424,101	2,723,794
1885	84	50	1,441	850,659	9,211,259	1,945,834	31,305,910	2,988,690
1886	83	65	1,486	894,488	9,747,452	2,160,090	32,730,745	3,070,111
1887	87	145	1,516	967,828	10,344,216	2,253,576	34,483,771	3,190,309
1888	100	140	1,592	1,011,258	10,946,219	2,452,887	37,793,903	3,454,974
1889	193	123	1,621	1,071,089	11,687.912	2,923,711	40,674,673	3,734,546
1890	122	159	1,647	1,140,573	12,783,629	3,169,155	43,731,669	4,275,617
1891	117	122	1,684	1,207,511	13,847,705	3,393,394	49,024,171	4,718,532
1892	127	24	1,791	1,284,843	14,647.707	3,773,616	51,060,854	4,743,352
1893	106	59	1,825	1,340,318	15,318,665	3,874,954	51,803,836	4,610,657
1894	113	61	1,930	1,373,004	15,756,064	4,064,681	52,110,800	4,928,838
						Totals ..	£760,660,092	£66,686,497

a The Total Number Registered to the end of 1862. *b* Reduced by 18,278 for 1864, 23,927 for 1865, and were included in the returns from the Retail Societies. *c* Estimated on the basis of the returns made to sum to be "Investments other than in Trade," which may mean investments in the Wholesale, Corn

UNITED KINGDOM.

for each Year, from 1862 to 1894 inclusive.

Sources, and Corrected.)

Trade Expenses.	Trade Stock.	Capital Invested in		Profit Devoted to Education.	Amount of Reserve Fund.	Year.
		Industrial and Provident Societies, and other than Trade.	Joint-stock Companies.			
· £	£	£	£	£	£	
127,749	....	....	....	....	....	1862
167,620	....	....	....	....	....	1863
163,147	....	....	....	....	....	1864
181,766	....	....	....	....	....	1865
219,746	....	....	....	....	....	1866
255,923	583,539	*d*494,429	....	3,203	32.629	1867
294,451	671,165	137,397	166,398	3,636	33,109	1868
280,116	784,847	117,586	178,367	3,814	38,630	1869
311,910	912,102	126,736	204,876	4,275	52.990	1870
346,415	1,029,446	145,004	262,594	5.097	66,631	1871
479,130	1,383,063	318,477	382,846	6,696	93.601	1872
556,540	1,627,402	370,402	449,039	7,107	102,722	1873
594,455	1,781,053	418,301	522,081	7,949	116.829	1874
686,178	2,095,675	667,825	553,454	10,879	241,930	1875
1,279,856	2,664,042	....	....	....	....	1876
1,381,961	2,648,282	....	....	....	....	1877
1,494,607	2,609,729	....	....	....	....	1878
1,537,138	2,857,214	....	....	....	....	1879
1,429,160	2,880,076	*e*3,447.347	....	13,910	....	1880
....	3,053,333	....	....	13,825	....	1881
1,690,107	3,452,942	*e*4,281.264	....	14,778	....	1882
1,826,804	3,709,555	*e*4,497,718	....	16,788	....	1883
1,936,485	3,575,836	*e*4,550,890	....	19,154	....	1884
2,082,539	3,729,492	*e*5,433,120	....	20,712	....	1885
1,800,347	4,072,765	*e*3,858,940	....	19,878	....	1886
1,960,374	4,360,836	*e*4,491,483	....	21,380	....	1887
2,045,391	4,556,593	*e*5,233,859	....	24,245	....	1888
2,182,775	4,795,132	*e*5,833,278	....	25,455	....	1889
2,361,319	5,141,750	*e*6,958,787	....	27,587	....	1890
2,621,091	5,838,370	*e*6,394,867	....	30,087	....	1891
2,902,994	6,175,287	*e*6,952,906	....	32,753	....	1892
3,181,818	6,314,715	*e*7,089,689	....	32,677	....	1893
3,267,288	5,905,442	7,174.736	....	36,553	....	1894

30,921 for 1866, being the number of "Individual Members" returned by the Wholesale Society, and which the Central Co-operative Board for 1881. *d* Includes Joint-stock Companies. *e* The return states this Mills, Joint-stock Companies, Building Departments, Banks, Mortgages, Loans, &c. *f* Estimated.

CO-OPERATIVE SOCIETIES,

TABLE (2).—GENERAL SUMMARY *of* RETURNS

(Compiled from Official

YEAR.	NO. OF SOCIETIES			Number of Members.	CAPITAL AT END OF YEAR.		Sales.	Net Profit.
	Registered in the Year.	Not Making Returns.	Making Returns.		Share.	Loan.		
					£	£	£	£
1862	*a*454	*f*68	332	90,341	428,376	54,499	2,333,523	165,562
1863	51	. 73	381	111,163	579,902	76,738	2,673,778	216,005
1864	146	110	394	*b*129,429	684,182	89,122	2,836,606	224,460
1865	101	182	403	*b*124,659	819,367	107,263	3,373,847	279,226
1866	163	240	441	*b*144,072	1,046,310	118,023	4,462,676	372,307
1867	137	192	577	171,897	1,475,199	136,734	6,001,153	398,578
1868	190	93	673	211,781	1,711,643	177,706	7,122,360	424,420
1869	65	133	754	229,861	1,816,672	179,054	7,353,363	438,101
1870	67	153	748	248,108	2,035,626	197,029	8,201,685	553.435
1871	56	235	746	262,188	2,305,951	215,453	9,463,771	666,399
1872	138	104	927	339,986	2,968,758	371,531	12,992,345	935,551
1873	225	135	978	387,301	3,579,962	496,740	15,623,553	1,109,795
1874	128	227	1,026	412,252	3,903,608	586,972	16,358,278	1,227,226
1875	116	283	1,163	479,284	4,793,909	844,620	18,484,382	1,427,365
1876	82	170	1,165	507,857	5,140,219	919,762	19,909,699	1,742,501
1877	66	240	1,144	528,576	5,437,959	1,073,265	21,374,013	1,922,361
1878	52	119	1,181	560,703	5,645,883	1,145,707	21,385,646	1,836,371
1879	51	146	1,145	573,084	5,747,907	1,496,143	20,365,602	1,856,308
1880	67	100	1,177	603,541	6,224,271	1,341,190	23,231,677	*c*1,866,839
1881	62	..	1,230	642.783	6.937,284	1,483,583	24,926,005	1,979,576
1882	66	113	1,276	685,981	7.581,739	1,622,253	27.509,055	2,153,699
1883	55	165	1,282	728,905	7,912,216	1,576,845	29,303,441	2,432,621
1884	76	57	1.391	896,845	8,636,960	1,830,624	30,392,112	2,722,103
1885	84	47	1,431	849,616	9,202,138	1,945,508	31,273,156	2,986,155
1886	82	62	1,474	893,153	9,738,278	2,159,746	32,684,244	3,067,436
1887	84	140	1,504	966,403	10,333,069	2,252,672	34,437,879	3,187,902
1888	100	130	1,579	1,009.773	10,935,031	2,452,158	37,742,429	3,451,577
1889	89	118	1,608	1,069,396	11,677,286	2,923,506	40,618,060	3,731,966
1890	110	151	1,631	1,138,780	12,776,733	3,168,788	43,667,363	4,273,010
1891	95	108	1,656	1,205,244	13,832,158	3,390,076	48,921,697	4,714,298
1892	118	14	1,753	1,282.103	14,627,570	3,766,737	50,902,681	4,739,771
1893	98	42	1,784	1,336,731	15,297,470	3,867,305	51,577,727	4,606,811
1894	101	43	1,880	1,368,944	15,732,061	4,054,172	51,846,349	4,923,027
						Totals ..	£759,350,155	£66,632,762

a The Total Number Registered to the end of 1862. *b* Reduced by 18,278 for 1864, 23,927 for 1865, and were included in the returns from the Retail Societies. *c* Estimated on the basis of the returns made to sum to be "Investments other than in Trade," which may mean investments in the Wholesale Corn

GREAT BRITAIN.

for each Year, from 1862 to 1894 inclusive.

Sources, and Corrected.)

Trade Expenses.	Trade Stock.	Capital Invested in		Profit Devoted to Education.	Amount of Reserve Fund.	Year.
		Industrial and Provident Societies, and other than Trade.	Joint-stock Companies.			
£	£	£	£	£	£	
127,749	....	....	....	....	....	1862
167,620	....	....	....	....	....	1863
163,147	....	....	....	....	....	1864
181,766	....	....	....	....	....	1865
219,746	....	....	....	....	....	1866
255,923	583,539	*d*494,429	....	3,203	32,629	1867
294,451	671,165	137,397	166,398	3,636	33,109	1868
280,116	784,847	117,586	178,367	3,814	38,630	1869
311,910	912,102	126,736	204,876	4,275	52,990	1870
346,415	1,029,446	145,004	262,594	5,097	66,631	1871
477,846	1,383,063	318,477	382,846	6,696	93,601	1872
555,766	1,627,402	370,402	449,039	7,107	102,722	1873
593,548	1,781,053	418,301	522,081	7,949	116,829	1874
685,118	2,094,325	667,825	553,454	10,879	241,930	1875
1,279,392	2,664,042	....	....	....	....	1876
1,381,285	2,647,309	....	....	....	....	1877
1,493,842	2,609,729	....	....	....	....	1878
1,536,282	2,857,214	....	....	....	....	1879
1,428,303	2,878,832	*e*3,429,935	17,407	13,910	....	1880
....	3,051,665	....	....	13,822	....	1881
1,689,823	3,450,481	*e*4,281,243	....	14,778	....	1882
1,818,880	3,706,978	*e*4,490,477	....	16,788	....	1883
1,933,297	3,572,226	*e*4,543,388	....	19,154	....	1884
2,080,427	3,726,756	*e*5,425,319	....	20,712	....	1885
1,797,696	4,068,831	*e*3,858,451	....	19,878	....	1886
1,957,873	4,354,857	*e*4,490,674	....	21,380	....	1887
2,041,566	4,550,743	*e*5,233,349	....	24,238	....	1888
2,178,961	4,789,170	*e*5,832,435	....	25,455	....	1889
2,357,647	5,136,580	*e*6,958,131	....	27,587	....	1890
2,617,200	5,832,573	*e*6,390,827	....	30,087	....	1891
2,897,117	6,168,947	*e*6,946,321	....	32,753	....	1892
3,174,460	6,309,624	*e*7,076,071	....	32,677	....	1893
3,256,156	5,898,804	*e*7,169,710	....	36,553	....	1894

30,921 for 1866, being the number of "Individual Members" returned by the Wholesale Society, and which the Central Co-operative Board for 1881. *d* Includes Joint-stock Companies. *e* The return states this Mills, Joint-stock Companies, Building Departments, Banks, Mortgages, Loans, &c. *f* Estimated.

CO-OPERATIVE SOCIETIES,

TABLE (3).—General Summary *of* Returns

(Compiled from Official

Year.	No. of Societies			Number of Members.	Capital at End of Year.		Sales.	Net Profit.
	Registered in the Year.	Not Making Returns.	Making Returns.		Share.	Loan.		
					£	£	£	£
1862	454	68	332	90,341	428,376	54,499	2,333,523	165,562
1863	51	73	381	111,163	579,902	76,738	2,673,778	216,005
1864	146	110	394	129,429	684,182	89,122	2,836,606	224,460
1865	101	182	403	124,659	819,367	107,263	3,373,847	279,226
1866	163	240	441	144,072	1,046,310	118,023	4,462,676	372,307
1867	137	192	577	171,897	1,475,199	136,734	6,001,153	398,578
1868	190	93	673	211,781	1,711,643	177,706	7,122,360	424,420
1869	65	133	754	229,861	1,816,672	179,054	7,353,363	438,101
1870	67	153	748	248,108	2,035,626	197,029	8,201,685	553,435
1871	56	235	746	262,188	2,305,951	215,453	9,463,771	666,399
1872	113	66	749	301,157	2,786,965	344,509	11,397,225	809,237
1873	186	69	790	340,930	3,344,104	431,808	13,651,127	959,493
1874	113	177	810	357,821	3,653,582	498,052	14,295,762	1,072,139
1875	98	237	926	420,024	4,470,857	742,073	16,206,570	1,250,570
1876	72	113	937	444,547	4,825,642	774,809	17,619,247	1,541,384
1877	58	186	896	461,666	5,092,958	916,955	18,697,788	1,680,370
1878	48	65	963	490,584	5,264,855	965,499	18,719,081	1,583,925
1879	40	106	937	504,117	5,374,179	1,324,970	17,816,037	1,598,156
1880	53	62	953	526,686	5,806,545	1,124,795	20,129,217	1,600,000
1881	50	..	971	552,353	6,431,553	1,205,145	21,276,850	1,657,564
1882	51	82	1,012	593,262	7,058,025	1,293,595	23,607,809	1,814,375
1883	42	158	990	622,871	7,281,448	1,203,764	24,776,980	2,036,826
1884	64	48	1,079	672,780	7,879,686	1,359,007	25,600,250	2,237,210
1885	73	47	1,114	717,019	8,364,367	1,408,941	25,858,065	2,419,615
1886	67	61	1,141	751,117	8,793,068	1,551,989	26,747,174	2,476,651
1887	73	139	1,170	813,537	9,269,422	1,598,420	28,221,988	2,542,884
1888	94	125	1,244	850,020	9,793,852	1,743,890	30,350,048	2,766,131
1889	81	112	1,268	897,841	10,424,169	2,098,100	33,016,341	2,981,543
1890	103	149	1,290	955,393	11,380,210	2,196,364	35,367,102	3,393,991
1891	88	108	1,313	1,008,448	12,253,427	2,260,686	39,617,376	3,781,254
1892	106	12	1,404	1,073,739	12,848,024	2,487,499	40,827,931	3,701,402
1893	92	40	1,432	1,119,210	13,400,837	2,453,723	41,483,346	3,592,856
1894	96	41	1,525	1,139,535	13,668,938	2,520,779	41,731,223	3,841,723
						Totals ..	£640,837,299	£55,077,792

ENGLAND AND WALES.

for each Year, from 1862 to 1894 inclusive.

Sources, and Corrected.)

Trade Expenses.	Trade Stock.	Capital Invested in		Profit Devoted to Education.	Amount of Reserve Fund.	Year.
		Industrial and Provident Societies, and other than Trade.	Joint-stock Companies.			
£	£	£	£	£	£	
127,749	....	....	....	....	....	1862
167,620	....	....	....	....	....	1863
163,147	....	....	....	....	....	1864
181,766	....	....	....	....	....	1865
219,746	....	....	....	....	....	1866
255,923	583,539	494,429	....	3,203	32,629	1867
294,451	671,165	137,397	166,398	3,636	33,109	1868
280,116	784,847	117,586	178,367	3,814	38,630	1869
311,910	912,102	126,736	204,876	4,275	52,990	1870
346,415	1,029,446	145,004	262,594	5,097	66,631	1871
419,567	1,219,092	300,712	380,043	6,461	79,292	1872
488,464	1,439,137	337,811	443,724	6,864	83,149	1873
517,445	1,572,264	386,640	510,057	7,486	98,732	1874
598,080	1,852,437	636,400	538,140	10,454	220,011	1875
1,137,053	2,377,380	....	....	....	....	1876
1,222,664	2,310,041	....	....	....	....	1877
1,315,364	2,286,795	....	....	....	....	1878
1,353,832	2,486,704	....	....	....	....	1879
1,285,875	2,512,039	†3,226,370	....	13,262	....	1880
....	2,585,443	....	....	13,314	....	1881
1,499,633	2,969,957	†3,919,455	....	14,070	....	1882
1,606,424	3,160,569	†4,113,995	....	15,903	....	1883
1,684,070	2,932,817	†4,118,751	....	18,062	....	1884
1,825,717	3,044,534	†4,811,819	....	19,374	....	1885
1,525,194	3,323,450	†3,475,319	....	18,440	....	1886
1,670,290	3,512,626	†4,112,807	....	19,707	....	1887
1,743,838	3,687,394	†4,868,141	....	22,391	....	1888
1,849,811	3,856,498	†5,386,444	....	23,388	....	1889
1,996,438	4,121,400	†6,407,701	....	24,919	....	1890
2,207,143	4,691,801	†5,749,811	....	27,196	....	1891
2,420,270	4,947,231	†6,154,426	....	29,105	....	1892
2,645,989	5,032,623	†6,234,093	....	29,151	....	1893
2,687,388	4,763,953	†6,054,847	....	32,503	....	1894

† "Investments at end of year"—the class not stated.

CO-OPERATIVE

TABLE (4).—General Summary *of* Returns

(Compiled from Official

Year.	Number of Societies			Number of Members.	Capital at End of Year.	
	Registered.	Not Making Returns.	Making Returns.		Share.	Loan.
					£	£
1872	25	38	178	38,829	181,793	27,022
1873	39	66	188	46,371	235,858	64,932
1874	15	50	216	54,431	250,026	88,920
1875	18	46	237	59,260	323,052	102,547
1876	10	57	228	63,310	314,577	144,953
1877	8	54	248	66,910	345,001	156,310
1878	4	54	218	70,119	381,028	180,208
1879	11	*40	208	68,967	373,728	171,173
1880	14	38	224	76,855	417,726	216,395
1881	12	9	259	90,430	505,731	278,438
1882	15	31	264	92,719	523,714	328,658
1883	13	7	292	106,034	630,768	373,081
1884	12	9	312	124,065	757,274	471,617
1885	11	..	317	132,597	837,771	536,567
1886	15	1	333	142,036	945,210	607,757
1887	11	1	334	152,866	1,063,647	654,252
1888	5	5	335	159,753	1,141,179	708,268
1889	8	6	340	171,555	1,253,117	825,406
1890	7	2	341	183,387	1,396,523	972,424
1891	7	..	343	196,796	1,578,731	1,129,390
1892	12	2	349	208,364	1,779,546	1,279,238
1893	6	2	352	217,521	1,896,633	1,413,582
1894	5	2	355	229,409	2,063,123	1,533,393
						Totals..£

* Not stated, but estimated at about 40.

SOCIETIES, SCOTLAND.

for each Year, from 1872 to 1894 inclusive.

Sources, and Corrected.)

Sales.	Net Profit.	Trade Expenses.	Trade Stock.	Capital Invested in		Profit Devoted to Education.	Amount of Reserve Fund.	Year.
				Industrial and Provident Societies, and other than Trade.	Joint-stock Companies.			
£	£	£	£	£	£	£	£	
1,595,120	126,314	58,279	163,971	17,765	2,803	235	14,309	..1872
1,972,426	150,302	67,302	188,265	32,591	5,315	243	19,573	..1873
2,062,516	155,087	76,103	208,789	31,661	12,024	463	18,097	..1874
2,277,812	176,795	87,038	241,888	31,425	15,314	425	21,919	..1875
2,290,452	201,117	142,339	286,662	..	..	..	..	..1876
2,676,225	241,991	158,621	337.268	..	..	..	..	..1877
2.666,565	252,446	178,478	322,934	..	..	..	..	..1878
2,549,565	258,152	182,450	370,510	..	..	..	..	..1879
3.102,460	266,839	142,428	366,793	203,565	17,407	648	..	..1880
3,649,155	322,012	..	466,222	..	..	508	..	..1881
3,901,246	339,324	190,190	480,524	†361,788	..	708	..	..1882
4,526,461	395.795	212,456	546,409	†376,482	..	885	..	..1883
4,791,862	484,893	249,227	639,409	†424,637	..	1,092	..	..1884
5,415,091	566,540	254,710	682,222	†613,500	..	1,338	..	..1885
5,937,070	590,785	272,502	745,381	†383,132	..	1,438	..	..1886
6.215,891	645,018	287,583	842,231	†377,867	..	1,673	..	..1887
7,392,381	685,446	297,728	863,349	†365.208	..	1,847	..	..1888
7,601,719	750,423	329,150	932,672	†445,991	. ..	2,067	..	..1889
8.300.261	879,019	361,209	1,015,180	†550,430	..	2,668	..	..1890
9,304,321	933,044	410,057	1,140,772	†641,016	..	2,891	..	..1891
10.074,750	1,038,369	476,847	1,221,716	†791,895	..	3,648	..	..1892
10,094,381	1,013,955	528,471	1,277,001	†841.978	..	3,526	..	..1893
10.115,126	1,081,304	568,768	1.134,851	†1,114,863	..	4,050	..	..1894
118.512,856	11,554,970							

† "Investments at end of year;" the class of investment is not stated.

CO-OPERATIVE SOCIETIES, IRELAND.

TABLE (5).—General Summary *of* Returns *for each Year, from 1872 to 1894 inclusive.*

(Compiled from Official Sources, and Corrected.)

Year.	Number of Societies			Number of Members.	Capital at end of Year.		Sales.	Net Profit.	Trade Expenses.	Trade Stock.	Capital Invested in		Profit Devoted to Education.	Amount of Reserve Fund.
	Registered.	Not Making Returns.	Making Returns.		Share.	Loan.					Industrial and Prov. Societies.	Joint-stock Companies.		
					£	£	£	£	£	£	£	£	£	£
1872	3	9	8	564	1,815	10	19,775	1,164	1,284	..	..	..	..	..
1873	1	3	5	464	1,443	90	16,161	863	774	..	..	..	..	..
1874	2	5	5	481	1,485	370	15,775	812	907	..	..	..	..	..
1875	1	2	7	792	9,638	5,370	15,519	1,725	1,060	1,350	..	..	..	67
1876	..	7	2	210	1,171	10	11,355	1,479	464	..	..	..	..	..
1877	1	6	4	505	7,490	10	16,434	2,190	676	973	..	..	..	..
1878	..	2	4	290	1,560	10	16,573	1,289	765	..	..	..	..	15
1879	1	..	6	537	7,615	200	17,170	1,482	856	..	..	..	45	71
1880	2	..	6	522	7,822	100	16,637	1,760	857	1,244	5	..	..	..
1881	4	..	10	834	2,889	..	19,058	1,533	1,039	1,668	8	..	3	..
1882	1	2	12	1,177	9,502	178	32,157	1,699	2,284	2,461	†21	..	..	..
1883	..	5	9	1,052	9,140	241	32,587	2,375	1,924	2,577	†7,241	..	..	..
1884	2	6	9	1,105	9,228	212	31,989	1,691	3,188	3,610	†7,502	..	..	..
1885	..	3	10	1,043	9,121	326	32,754	2,535	2,112	2,736	†7,801	..	..	..
1886	1	3	12	1,335	9,174	344	46,501	2,675	2,651	3,934	..	..	..	..
1887	3	5	12	1,425	11,147	904	45,892	2,407	2,501	5,979	†809	..	..	..
1888	1	10	13	1,485	11,188	729	51,474	3,397	3,825	5,850	†510	..	7	..
1889	4	5	13	1,693	10,626	205	56,613	2,580	3,814	5,962	†843	..	..	..
1890	12	8	16	1,793	6,896	367	64,306	2,607	3,672	5,170	†656	..	..	..
1891	22	14	28	2,267	15,547	3,318	102,474	4,234	3,891	5,797	†4,040	..	..	..
1892	9	10	38	2,740	20,137	6,879	158,173	3,581	5,877	6,340	†6,585	..	..	..
1893	8	17	41	3,587	21,195	7,649	226,109	3,846	7,358	5,091	†13,618	..	..	..
1894	12	18	50	4,060	24,003	10,509	264,451	5,811	11,132	6,638	†5,026	..	..	..
						Totals..£	1,309,937	53,735						

† "Investments at end of year;" the class not stated.

CO-OPERATIVE SOCIETIES IN ENGLAND AND WALES

WITH AN

ANNUAL TRADE IN 1895 OF OVER £200,000.

(See Table 6, pages 526–27.)

THE number of societies under this head is twenty-six, of which eleven are in Lancashire, eight in Yorkshire, three in Durham, and one each in Cheshire, Derbyshire, Devonshire, and Northumberland.

The combined sales of these twenty-six societies amount to £18,224,282, being 48 per cent of the entire sales of societies in England and Wales. The Wholesale Society comes first with a business of £10,141,917, followed by Leeds Society and Corn Mill, with sales amounting to £883,923; next come Bolton, Barnsley British, Newcastle-on-Tyne, Oldham Industrial, Gateshead, Burnley, Pendleton, and Bishop Auckland, all of whose sales considerably exceed £300,000. The sales of the remaining sixteen societies are under that sum.

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CO-OPERATIVE SOCIETIES IN ENGLAND AND WALES

WITH AN

ANNUAL TRADE OF BETWEEN £100,000 & £200,000.

(See Table 7, pages 528–29.)

Of the forty-two societies coming under this head for 1896, Lancashire furnishes eleven, Yorkshire eleven, Durham nine, Cumberland and Cheshire two, Leicestershire, Derbyshire, Lincolnshire, Essex, Glamorganshire, Kent, and Northumberland one each. Their total sales are £5,878,958, or 14 per cent of the total sales of societies in England and Wales.

CO-OPERATIVE SOCIETIES,

BIRD'S-EYE VIEW

TABLE (6) showing the Sales of all Societies which,

No.	NAMES OF SOCIETIES.	COUNTIES.	1876.	1877.	1878.
1	Rochdale Equitable Pioneers ..	Lancashire..	£305,191	£311,715	£299,039
2	Rochdale Co-op. Corn Mill	Lancashire..	....	252,045	285,920
3	Co-operative Wholesale Society.	Lancashire..	2,697,366	2,827,052	2,705,625
4	Sowerby Bridge Corn Mill	Yorkshire ..	406,017	460,013	468,001
5	Halifax Industrial	Yorkshire ..	237,754	237,447	209,571
6	Leeds Industrial and Corn Mill.	Yorkshire ..	365,639	374,166	358,865
7	Oldham Industrial............	Lancashire..	284,977	316,903	279,999
8	Bury District	Lancashire..	231,692	251,057	241,886
9	Halifax Corn Mill	Yorkshire ..	207,648	244,262	224,018
10	Manchester Equitable	Lancashire..	....	....	....
11	Bolton	Lancashire..	....	....	....
12	Gateshead	Durham	....	....	....
13	Barnsley British..............	Yorkshire ..	....	....	....
14	Oldham Equitable	Lancashire..	....	....	....
15	Huddersfield	Yorkshire ..	....	....	....
16	Newcastle-upon-Tyne	Northmbrlnd	....	....	....
17	Accrington and Church........	Lancashire..	....	....	....
	Totals	....	4,736,284	5,274,660	5,072,924

No.	NAMES OF SOCIETIES.	COUNTIES.	1886.	1887.	1888.
1	Rochdale Equitable Pioneers ..	Lancashire..	£246,031	£256,736	£267,727
2	Rochdale Co-op. Corn Mill	Lancashire..	....	....	....
3	Co-operative Wholesale Society.	Lancashire..	5,223,179	5,713,235	6,200,074
4	Sowerby Bridge Corn Mill	Yorkshire ..	333,655	357,886	406,185
5	Halifax Industrial	Yorkshire ..	224,870	224,259	223,217
6	Leeds Industrial and Corn Mill.	Yorkshire ..	480,204	526,002	558,771
7	Oldham Industrial............	Lancashire..	312,230	322,090	337,368
8	Bury District	Lancashire..	240,239	236,042	241,033
9	Halifax Corn Mill	Yorkshire ..	....	222,008	....
10	Manchester Equitable	Lancashire..	229,886	233,181	249,340
11	Bolton	Lancashire..	335,877	327,288	357,001
12	Gateshead	Durham	269,585	266,005	272,877
13	Barnsley British..............	Yorkshire ..	283,903	293,876	292,635
14	Oldham Equitable	Lancashire..	228,946	228,523	233,454
15	Huddersfield	Yorkshire ..	209,426	252,682	269,865
16	Newcastle-upon-Tyne	Northmbrlnd	338,030	328,848	327,911
17	Accrington and Church	Lancashire..	209,291	211,226	214,728
18	Bishop Auckland	Durham	200,931	209,969	212,471
19	Brighouse....................	Yorkshire ..	....	204,127	209,948
20	Bradford	Yorkshire ..	....	....	202,930
21	Pendleton	Lancashire..	....	....	204,501
22	Burnley	Lancashire..	....	....	213,219
23	Crook	Durham	....	....	....
24	Plymouth....................	Devonshire..	....	....	....
25	Derby	Derbyshire ..	....	....	....
26	Chester-le-Street..............	Durham	....	....	....
27	Dewsbury....................	Yorkshire ..	....	....	....
28	Crewe Friendly	Cheshire	....	....	....
29	Leigh	Lancashire..	....	....	....
30	Eccles	Lancashire..	....	....	....
	Totals	....	9,366,283	10,413,983	11,495,255

ENGLAND AND WALES.

OF SALES.

during the years 1876 to 1895, exceeded £200,000 a year.

1879.	1880.	1881.	1882.	1883.	1884.	1885.	No.
£270,070	£283,655	£272,141	£274,627	£276,457	£262,270	£252.072	1
270,337	301,836	299,672	286,966	259.396	209,912	....	2
2,645,331	3,339,681	3.574,095	4.038,238	4,546,891	4.675,371	4,793,151	3
447,301	565,194	589,929	594,664	499,260	395,502	343.723	4
....	207,539	....	....	206,058	224.780	226,175	5
360,017	412,225	432,811	438.478	486,784	490,332	495,297	6
261,813	303,012	310,387	320.336	335,672	344,647	330,038	7
217,282	231,918	225,689	240.227	250.123	249.978	256,545	8
....	....	....	....	....	240,363	203,877	9
208,513	242,966	242,535	254,124	258,935	240,241	232.998	10
....	....	219,657	254,414	295,437	326.201	324,467	11
....	....	200,261	225,202	248.364	248,295	268,720	12
....	....	....	215,421	253.512	266.616	260,112	13
....	....	....	210,581	235,678	239.364	227,873	14
....	....	....	201,718	208,710	....	....	15
....	....	....	....	239,877	286,686	312,719	16
....	....	....	....	....	200.608	208.307	17
4,680,664	5,888,026	6,367,177	7,554,996	8,601,154	8.901,166	8,736,074	

1889.	1890.	1891.	1892.	1893.	1894.	1895.	No.
£270,675	£270,583	£296,025	£302.454	£290.238	£285,143	£290,056	1
201,159	235.274	315,596	254.062	....	....	....	2
7,028,944	7,429,073	8,766,430	9,300.904	9.526,167	9.443,937	10,141,917	3
430,703	472,668	525,734	457,673	366,081	299,781	286,620	4
231,256	241,262	256.326	272,967	266.725	246.160	255,356	5
639,223	692,435	802,936	861,959	847,063	834,569	883,923	6
350,698	345,335	378.008	380,861	361,926	374.773	382.065	7
246,112	262,624	288,821	293.317	281,620	276.310	278,275	8
....	216,516	280,226	274.576	218,216	....	....	9
267,960	282,957	298,154	290,960	274,681	269.492	265,740	10
392,458	428,529	496,011	516,906	526,747	545,584	569,213	11
282,186	301,347	334,053	344.797	350,242	333,065	335,241	12
327,704	395,433	498,489	531,964	482.129	471,626	467,172	13
242,959	254.074	271,883	267,446	255.666	260,022	263,909	14
287,844	294.357	312,865	307,116	293.917	272.173	292,567	15
338,339	380,895	432,338	445,004	426,212	376,655	383.985	16
209,776	....	206,140	207,945	....	211,498	217,537	17
229,224	266,886	266,886	308,426	297,035	304,806	301,152	18
219,917	225,464	241,008	232,648	216,745	214,331	228.613	19
224,911	223,265	256,500	290,930	304.595	248,977	279,844	20
225,488	240,827	279,942	290,710	307,642	316,979	339.650	21
238,824	256,530	281,727	298.019	291.224	319.630	337,389	22
....	221,269	....	203,953	210,006	213,203	202,123	23
....	212,113	240,675	240.570	237,235	258,529	274,484	24
....	....	206,315	213,889	212,984	231,961	242,935	25
....	....	213,846	202,596	203,801	....	....	26
....	....	200.255	237,147	227,499	224.070	235,592	27
....	....	213,703	226,566	212,947	....	....	28
....	....	....	231,464	209,765	234,188	253.675	29
....	....	....	....	....	202,738	212,249	30
12,886,360	14,149.816	17,160,892	18,287,829	17,699,108	17,270.200	18,224,282	

CO-OPERATIVE SOCIETIES—ENGLAND AND WALES.

BIRD'S-EYE VIEW OF SALES.

TABLE (7) showing the SALES *of all* SOCIETIES *which, during the years 1892 to 1895, were over £100,000 and under £200,000 a year; also* SALES *of the same* SOCIETIES *for the year 1885.*

No.	NAME OF SOCIETY.	COUNTY.	1885.	1892.	1893.	1894.	1895.
			£	£	£	£	£
1	Crewe Friendly	Cheshire	130,554	(over)	(over)	189,764	171,916
2	Stockport (Chestergate)	Cheshire	39,256	116,337	116,546	127,205	135,744
3	Carlisle	Cumberland	87,780	129,453	120,362	117,312	109,041
4	Cleator Moor	Cumberland	106,213	119,818	115,659	130,767	122,412
5	Ripley	Derbyshire	63,090	121,977	108,352	112,241	128,560
6	Annfield Plain	Durham	71,471	159,583	185,502	191,254	192,552
7	Blaydon	Durham	157,850	147,343	130,449	137,211	140,789
8	Chester-le-Street	Durham	130,235	(over)	(over)	199,774	198,337
9	Haswell	Durham	115,342	....	....	102,576	124,046
10	Jarrow Industrial	Durham	45,187	112,520	....	....	....
11	Stockton-on-Tees	Durham	38,872	114,551	123,193	132,269	137,053
12	Sunderland	Durham	56,626	110,773	....	102,165	136,939
13	West Stanley	Durham	40,643	....	108,541	120,932	125,855
14	Birtley	Durham	52,207	....	....	101,995	....
15	Ryhope and Silksworth	Durham	35,533	....	....	109,924	117,769
16	Hartlepools	Durham	13,497	....	....	101,415	102,336
17	Stratford	Essex	92,022	177,107	157,638	144,401	136,775
18	Cwmbach and Aberaman	Glamorgan	90,941	128,488	118,385	127,428	136,917
19	Gloucester	Gloucestershire	93,786	123,485	106,691	....	....
20	Woolwich Royal Arsenal	Kent	72,121	143,108	136,352	139,147	147,462
21	Accrington and Church	Lancashire	(over)	(over)	199,141	(over)	(over)
22	Barrow-in-Furness	Lancashire	22,202	108,380	....	....	101,743
23	Eccles	Lancashire	114,814	189,767	193,088	(over)	(over)

CO-OPERATIVE SOCIETIES—ENGLAND AND WALES.

Bird's-eye View of Sales—*continued.*

No.	Name of Society.	County.	1885.	1892.	1893.	1894.	1895.
			£	£	£	£	£
24	Failsworth	Lancashire......	111,469	139,834	142,810	151,059	156,969
25	Farnworth and Kearsley ..	Lancashire......	68,377	131,075	126,124	121,913	125,341
26	Heywood	Lancashire......	85,784	110,042	111,060	115,195	113,800
27	Nelson	Lancashire......	40,005	104,776	111,469	132,938	164,418
28	Oldham Star Corn Mill....	Lancashire......	188,949	197,629	179,186	154,719	151,944
29	Over Darwen Industrial ..	Lancashire......	91,037	129,314	126,129	135,418	140,319
30	Preston..................	Lancashire......	65,756	143,627	171,960	180,770	187,728
31	Radcliffe and Pilkington ..	Lancashire......	98,626	148,479	139,645	138,419	136,501
32	Rochdale Corn Mill	Lancashire......	192,633	....	186,271	168,449	180,048
33	St. Helens	Lancashire......	13,999	....	....	....	105,058
34	Leicester	Leicestershire ..	150,711	151,859	155,544	150,303	165,519
35	Lincoln..................	Lincolnshire	95,145	183,203	184,343	176,380	176,615
36	Cramlington	Northumberland.	83,046	115,095	111,339	118,574	117,720
37	Batley	Yorkshire	97,748	133,083	127,555	123,812	129,111
38	Brightside and Carbrook ..	Yorkshire	12,217	100,873	102,151	112,540	135,285
39	Doncaster................	Yorkshire	58,167	103,464	109,577	119,724	131,504
40	Halifax Flour	Yorkshire	(over)	(over)	(over)	179,672	190,593
41	Heckmondwike	Yorkshire	137,951	157,931	152,512	146,421	148,883
42	Keighley	Yorkshire	101,010	161,324	166,151	164,514	170,005
43	Middlesbrough	Yorkshire	88,007	103,789	103,995	105,267	107,018
44	Morley	Yorkshire	75,444	126,950	120,498	116,659	121,966
45	Sowerby Bridge	Yorkshire	85,764	106,642	104,351	101,840	105,358
46	Todmorden	Yorkshire	102,336	134,874	129,960	118,235	127,266
47	Windhill	Yorkshire	67,695	122,430	120,217	116,034	123,743
	Totals	....	3,782,118	4,808,983	4,902,746	5,536,635	5,878,958

LIST OF PUBLIC ACTS OF PARLIAMENT.

(59 AND 60 VICTORIA—1896).

⁎ *The figures before each Act denote the Chapter.*

1. Local Government (Elections).
2. Army (Annual).
3. Consolidated Fund (No. 1).
4. Local Government (Elections), No. 2.
5. Poor Law Guardians (Ireland) (Women).
6. Naval Works.
7. Consolidated Fund (No. 2).
8. Life Assurance Companies (Payment into).
9. Local Government (Determination of Differences).
10. Dispensary Committees (Ireland).
11. Housing of Working Classes (Ireland).
12. Derelict Vessels (Report).
13. Incumbents of Benefices Loans Extension.
14. Short Titles.
15. Diseases of Animals.
16. Agricultural Rates.
17. Glasgow Parliamentary Divisions.
18. Fisheries (Norfolk and Suffolk).
19. Public Health.
20. Public Health (Ports).
21. Liverpool Court of Passage.
22. Chairmen of District Councils.
23. Public Offices (Westminster) Site.
24. Edinburgh General Register House.
25. Friendly Societies.
26. Collecting Societies and Industrial Co-operative Societies.
27. London Cab.

LIST OF PUBLIC ACTS OF PARLIAMENT—*continued.*

28. Finance.
29. Bishopric of Bristol Amendment.
30. Conciliation.
31. Housing of the Working Classes Act, 1890, Amendment (Scotland).
32. Orkney and Zetland Small Piers and Harbours.
33. Royal Naval Reserve Volunteers.
34. Railways (Ireland).
35. Judicial Trustees.
36. Locomotives on Highways.
37. Agricultural Rates, Congested Districts, &c.
38. Uganda Railway.
39. Expiring Laws Continuance.
40. Telegraph (Money).
41. Local Taxation (Ireland) Estate Duty.
42. Public Works Loans.
43. Coal Mines Regulations.
44. Truck.
45. Stannaries Court (Abolition).
46. Consolidated Fund (Appropriation).
47. Land Law (Ireland).
48. Light Railways.
49. Law Agents (Scotland) Act Amendment.
50. Poor Law Officers' Superannuation.
51. Vexatious Actions.
52. Larceny.
53. Labourers (Ireland).
54. Public Health (Ireland).
55. Quarter Sessions (London).
56. Wild Birds Protection.
57. Burglary.
58. West Highland Railway Guarantee.
59. Baths and Washhouses.

Wild Birds Protection Act, 1896.

CHAPTER 56.

An Act to amend the Wild Birds Protection Acts. [*14th August, 1896.*]

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

1. From and after the passing of this Act the powers exerciseable by the Secretary of State on application under section eight of the Wild Birds Protection Act, 1880, shall extend to the making of an order prohibiting, for special reasons mentioned in the application, the taking or killing of particular kinds of wild birds during the whole or any part of that period of the year to which the protection of wild birds under that Act does not extend, or the taking or killing of all wild birds in particular places during the whole or any part of that period.

2. Public notice of any order made under this Act shall be given in the manner required by the Wild Birds Protection Act, 1894, with respect to orders made under that Act.

3. The powers exerciseable under the Wild Birds Protection Act, 1894, by the county council of an administrative county are hereby declared to be exerciseable by the council of a county borough, and any expenses incurred by the council of a county borough under that Act or this Act may be defrayed out of the borough fund or borough rate.

4. Where any person is convicted of an offence against this Act or the principal Act, the court may, in addition to any penalty that may be imposed, order any trap, net, snare, or decoy bird used by such person for taking any wild bird to be forfeited.

5. This Act shall apply to Scotland with the substitution of the Secretary for Scotland for a Secretary of State.

6. This Act shall not extend to Ireland.

7. This Act may be cited as the Wild Birds Protection Act, 1896, and shall be construed with the Wild Birds Protection Act, 1880, the Wild Birds Protection Act, 1881, and the Wild Birds Protection Act, 1894, and those Acts and this Act may be cited collectively as the Wild Birds Protection Acts, 1880 to 1896.

Collecting Societies and Industrial Assurance Companies Act, 1896.

CHAPTER 26.

AN ACT TO CONSOLIDATE THE ENACTMENTS RELATING TO FRIENDLY SOCIETIES AND INDUSTRIAL ASSURANCE COMPANIES WHICH RECEIVE CONTRIBUTIONS AND PREMIUMS BY MEANS OF COLLECTORS. [*7th August, 1896.*]

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

1. This Act shall apply to every such—

(*a*) friendly society or branch, whether registered or unregistered (in this Act referred to as a collecting society); and

(*b*) person or body of persons, whether corporate or unincorporate, granting assurances on any one life for a less sum than twenty pounds (in this Act referred to as an industrial assurance company),

as receives contributions or premiums by means of collectors at a greater distance than ten miles from the registered office or principal place of business of the society or company, and, in the case of an industrial assurance company, at less periodical intervals than two months:

Provided that nothing in this Act shall, except as expressly provided thereby, apply to any assurance with an industrial assurance company the premiums in respect of which are receivable at greater periodical intervals than two months.

2. (1) A collecting society shall deliver to every person, on his becoming a member of or insuring with the society, a copy of the rules of the society, together with a printed policy signed by two of the committee and by the secretary, at a price not exceeding one penny for the rules and one penny for the policy.

(2) In the case of a family enrolled in one book or card, one copy of rules and one family policy shall be sufficient.

3. A forfeiture shall not be incurred by any member or person insured in a collecting society or industrial assurance company by reason of any default in paying any contribution until after—

(*a*) notice stating the amount due by him, and informing him that in case of default of payment by him within a reasonable time, not being less than fourteen days, and at a place to be specified in the notice, his interest or benefit will be forfeited, has been served upon him by or on behalf of the society or company; and

(*b*) default has been made by him in paying his contribution in accordance with that notice.

4. (1) A member of or person insured with a collecting society or industrial assurance company shall not, except in the case of—

(*a*) as respects a collecting society, an amalgamation transfer of engagements or conversion into a company under the Friendly Societies Act, 1896; or

(*b*) as respects an industrial assurance company, an amalgamation or transfer of business under the Life Assurance Companies Acts, 1870 to 1872,

become or be made a member of or be insured with any other such society or company without his written consent, or, in the case of an infant, without the consent of his father or other guardian.

(2) The society or company to which the member or person is sought to be transferred shall, within seven days from his application for admission to that society or company, give notice thereof in writing to the society or company from which he is sought to be transferred.

5. (1) At least one general meeting of every collecting society and industrial assurance company shall be held in every year.

(2) Except where the day, hour, and place of an annual or other periodical meeting is fixed by the rules, notice of every general meeting shall either be given by the society or company to the members by advertisement to be published at least twice in two or more of the newspapers in general circulation in every county where the society or company carries on business, or be served upon every member.

(3) The notice shall specify the day, hour, and place, and the objects of the meeting, and in case any amendment of a rule is intended to be proposed shall contain a copy of every such amendment.

(4) The society or company shall publish the last of such advertisements, or serve such notice as aforesaid, at least fourteen days before the day appointed for the meeting, and shall during those fourteen days keep a copy of the notice in legible characters affixed in some conspicuous place in or outside every office at which the business of the society or company is carried on.

(5) For the purposes of this section the several ridings of the county of York, the several Channel Islands, and the Isle of Man respectively, shall be deemed to be counties.

6. (1) A copy of every balance sheet of a collecting society shall, during the seven days next preceding the meeting at which the balance sheet is to be presented, be kept open by the society for inspecton at every office at which the business of the society is carried on, and shall be delivered or sent by post to every member on demand.

(2) The annual returns required to be sent to the registrar under the Friendly Societies Act, 1896, shall, in the case of a collecting society, be certified by some person not an officer of the society (otherwise than as auditor thereof) carrying on publicly the business of an accountant, and if not so certified shall be deemed not to have been made.

7. In all disputes between a collecting society or industrial insurance company and any member or person insured, or any person claiming through a member or person insured, or under the rules, that member or person may, notwithstanding any provisions of the rules of the society or company to the contrary, apply to the county court, or to the court of summary jurisdiction for the place where that member or other person resides, and the court may settle that dispute according to the provisions of the Friendly Societies Act, 1896.

8. A collector of a collecting society or industrial assurance company shall not, whilst he is such, be capable of—

(*a*) being a member of the committee; or

(*b*) holding any other office in the society or company except that of superintending collectors within a specified area; or

(*c*) voting at or taking part in the proceedings of any meeting of the society or company.

9. In the case of any collecting society registered after the thirty-first day of December, one thousand eight hundred and ninety-five, the last words in the name of the society shall be "collecting society."

10. The foregoing provisions of this Act shall be set forth in the rules of every collecting society and, where applicable, of every industrial assurance company established after the thirty-first day of December, one thousand eight hundred and seventy-five.

11. (1) The chief registrar may, on the application of a collecting society registered or applying for registry, with the approval in each case of the Treasury, grant to the society a certificate of exemption from the foregoing provisions of this Act, in any case in which he is of opinion that the society is not one to which those provisions ought to apply.

(2) The certificate shall be subject to revocation by the chief registrar, with the approval in each case of the Treasury, but shall remain in force until so revoked, and until notice of the revocation has been advertised in the *London Gazette* and in some newspaper in general circulation in the neighbourhood of the registered office of the society, and also transmitted by a registered letter to the society.

(3) So long as the certificate is in force the society shall be subject to all the provisions and entitled to all the privileges of the Friendly Societies Act, 1896, as if it were a friendly society not receiving contributions by means of collectors at a greater distance than ten miles from the registered office.

12. The provisions of section seventy-six and sections seventy-eight to eighty-three of the Friendly Societies Act, 1896, relating to the appointment of inspectors, the calling of special meetings, and the dissolution of registered societies shall apply to every collecting society, and in the case of a society having branches shall so apply without the consent of the central body of the society.

13. (1) The provisions of sections sixty-two to sixty-seven and section eighty-four of the Friendly Societies Act, 1896, relating to payments on the death of children, shall extend to industrial assurance companies, as if the word society where used in those sections included all industrial companies assuring the payment of money on the death of children under the age of ten years.

(2) An assurance made, or to be made by an industrial assurance company, of a sum of money payable on the death of a child under the age of ten years, which would be valid if effected with a registered society, shall not be invalidated by reason of any provision contained in the Life Assurance Act, 1774.

(3) The provisions of this section shall extend to industrial assurance companies which do not receive premiums by means of collectors at a greater distance than ten miles from their principal place of business, and to assurances with any such company the premiums in respect of which are receivable at greater periodical intervals than two months.

14. (1) It shall be an offence under this Act if—

(*a*) a collector of a collecting society or industrial assurance company becomes a member of the committee, or holds any other office (except as in this Act provided) in the society or company, or a member of the committee becomes a collector, or a collector votes at or takes part in the proceedings of a general meeting;

(*b*) a person attempts to transfer a member or person insured from one collecting society or industrial assurance company to another without such written consent as is by this Act required;

(*c*) a collecting society or industrial assurance company to which a member or person is sought to be transferred fails to give such notice as is by this Act required.

(2) The provisions of the Friendly Societies Act, 1896, with respect to offences under that Act and the procedure relating thereto, shall apply in the case of offences under this Act, and as so applied shall extend to unregistered collecting societies and industrial assurance companies as if they were registered societies.

15. If any person wilfully makes, orders, or allows to be made any entry, erasure in, or omission from a contribution or collecting book, with intent to falsify that book, or to evade any of the provisions of this Act, he shall be liable to a fine not exceeding fifty pounds recoverable at the suit of the chief or any assistant registrar, or of any person aggrieved.

16. Where any notice is required by this Act to be served upon any member or other person, the notice shall be in writing, and either delivered or sent by post to him, or, in the case of a notice of default, left at his last known place of abode.

17. (1) In this Act, unless the context otherwise requires—

The expression "collector" shall include every paid officer, agent, or person, howsoever remunerated, who, by himself or by any deputy or substitute, collects contributions for a collecting society or industrial assurance company, or holds any interest in a collecting book thereof, but shall not include—

(*a*) the secretary or other officer of a branch of a society who receives contributions on behalf of the society, or of any other branch thereof; or

(*b*) any officer appointed to superintend and receive moneys from collectors within a specified area, not being himself a collector; or

(*c*) any agent appointed and remunerated by members, and not under the control of the society or company, or of any officer thereof.

Other expressions have the same meaning as in the Friendly Societies Act, 1896.

(2) The power of the Treasury to make regulations for carrying the Friendly Societies Act, 1896, into effect shall extend to the making of regulations for carrying this Act into effect.

(3) The application of this Act to Scotland, the Isle of Man, and the Channel Islands shall be subject to the same modifications as are expressed in the Friendly Societies Act, 1896, with respect to the application of that Act.

18. The Acts mentioned in the schedule to this Act are hereby repealed to the extent mentioned in the third column of that schedule.

19. This Act shall come into operation on the first day of January next after the passing thereof, and shall extend to the whole of the British Islands.

20. This Act may be cited as the Collecting Societies and Industrial Assurance Companies Act, 1896.

SCHEDULE.

Session and Chapter.	Short Title.	Extent of Repeal.
38 & 39 Vict., c. 60.	The Friendly Societies Act, 1875.	The whole Act so far as it is unrepealed.
50 & 51 Vict., c. 56.	The Friendly Societies Act, 1887.	The whole Act so far as it is unrepealed.
52 & 53 Vict., c. 22.	The Friendly Societies Act, 1889.	The whole Act.
58 & 59 Vict., c. 26.	The Friendly Societies Act, 1895.	The whole Act so far as it is unrepealed.

Agricultural Rates Act, 1896.

ARRANGEMENT OF SECTIONS.

Section.
1. Exemption of agricultural land from half of rates to which this Act applies.
2. Payment out of Local Taxation Account in respect of deficiency arising from exemption.
3. Contributions from more than one parish.
4. Certifying of annual sums payable in respect of deficiency.
5. Separate statement in valuation lists, &c., of value of agricultural land.
6. Procedure for ascertaining deficiency and for separation of value of agricultural land from buildings and other hereditaments.
7. As to spending authorities.
8. As to limit of rate or expenditure in case of any local authority.
9. Definitions.
10. Short title.

SCHEDULE.

CHAPTER 16.

AN ACT TO AMEND THE LAW WITH RESPECT TO THE RATING OF OCCUPIERS OF AGRICULTURAL LAND IN ENGLAND, AND FOR OTHER PURPOSES CONNECTED THEREWITH. [*20th July, 1896.*]

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

1. (1) During the continuance of this Act, that is to say, the period of five years after the thirty-first day of March next after the passing of this Act, the occupier of agricultural land in England shall be liable, in the case of every rate to which this Act applies, to pay one half only of the rate in the pound payable in respect of buildings and other hereditaments.

(2) This Act shall apply to every rate as defined by this Act, except a rate—

(*a*) which the occupier of agricultural land is liable, as compared with the occupier of buildings or other hereditaments, to be assessed to or to pay in the proportion of one half or less than one half, or

(*b*) which is assessed under any commission of sewers, or in respect of any drainage, wall, embankment, or other work for the benefit of the land.

2. (1) In respect of the deficiency which will arise from the provisions of this Act in the produce of rates made by the spending authorities in England, as herein-after defined, there shall during the continuance of this Act—

(*a*) be paid to the Local Taxation Account an annual sum (in this Act referred to as the annual grant) of such amount as is certified under the provisions herein-after contained; and

(*b*) be issued from the Local Taxation Account by half-yearly payments out of the annual grant to each such spending authority a share of that grant of such amount as is certified under the provisions herein-after contained.

(2) The Commissioners of Inland Revenue, in such manner, by such payments, and under such regulations as the Treasury direct, shall pay to the Local Taxation Account, out of the proceeds of the estate duty derived in England from personal property, the annual sum required by this section to be paid to that account.

(3) The first of those payments shall be made during the six months ending on the thirty-first day of March next after the passing of this Act, so as to make up a half-yearly payment to meet the issues to spending authorities on account of the six ensuing months.

3. (1) Where any spending authority require in any half year or other period to raise from two or more parishes a sum by a rate to which this Act applies, they shall, in determining the net amount to be so raised, deduct the sum issuable to them in respect of the said rate on account of their share of the annual grant for the said half year or other period, and the net amount after that deduction shall, where it would otherwise be raised in proportion to the rateable value, be raised in proportion to the assessable value of those parishes.

(2) For the purposes of this section the assessable value of a parish shall be the rateable value thereof reduced by an amount equal to one half of the rateable value of the agricultural land in the parish.

4. (1) The Local Government Board shall, as soon as may be after the passing of this Act, certify the amount—

(*a*) of the annual grant to be paid to the Local Taxation Account; and

(*b*) of the share of such grant to be paid annually to each spending authority,

under this Act, and for that purpose shall determine in the prescribed manner the amount which for the purposes of this Act is to be taken as having been raised during the last year before the passing of this Act by any rate to which this Act applies for the expenditure of each spending authority.

(2) Such proportion of the whole amount so taken to be raised in respect of any hereditaments or parishes as the Local Government Board estimate to be the proportion of the total rateable value of those hereditaments or parishes which represents the value of agricultural land, shall be taken for the purposes of this Act as the amount raised during the said year, by the said authority, by the said rate, in respect of agricultural land, and one half of that amount shall be taken as the deficiency which will arise from the provisions of this Act in the produce of the said rate.

(3) A sum equal to the total amount of the deficiencies thus estimated for all the spending authorities in England shall be the amount of the annual grant, and a sum equal to the deficiency thus estimated in the case of each spending authority shall be the share of that spending authority in the annual grant, and the Local Government Board shall certify the same accordingly.

(4) The Local Government Board, in acting under this section, shall obtain such information and make such inquiries, and in such manner as they think fit.

(5) The Local Government Board may in case of error amend, or for the purpose of meeting any alteration in an area or authority to which a certificate relates may vary, a certificate under this section, and any such amendment or variation shall have effect from the date of the original certificate, or any later date fixed by the Board; but, save as aforesaid, a certificate shall be final and binding on all persons.

(6) The Local Government Board may give provisional certificates, if they think necessary for the purpose of enabling the first payments to and out of the Local Taxation Account under this Act to be made, before they have sufficient information to enable them to give final certificates.

5. In every valuation list and in the basis or standard for any county rate, and in any valuation made by the council of a borough or any other council for the purpose of raising the borough or other rate—

(*a*) where separate hereditaments are specified therein, the value of agricultural land shall be stated separately from that of any building or other hereditament; and

(*b*) in every case the total rateable value of the agricultural land in each parish shall be stated separately from the total rateable value of the buildings or other hereditaments in such parish; and whenever a copy of the total of the rateable value of any parish is required to be sent to any person, such copy shall state both the abovementioned totals; and

(*c*) where any hereditament consists partly of agricultural land and partly of buildings, the gross estimated rental of the buildings, when valued separately, in pursuance of this Act, from the agricultural land shall, while the buildings are used only for the cultivation of the said land, be calculated not on structural cost, but on the rent at which they would be expected to let to a tenant from year to year, if they could only be so used; and the total gross estimated rental of the hereditament shall not be increased by the said separate valuation.

6. (1) For the purposes of this Act returns shall be made to the Local Government Board in accordance with the prescribed regulations—

(*a*) by every spending authority in relation to the sums actually received by them or their predecessors during the year next before the passing of this Act from any rate to which this Act applies; and

(*b*) by every assessment committee or council whose duty it is to revise or make a valuation list, basis, standard, or other valuation for any parish, in relation to the gross estimated rental and rateable value of that parish, and the proportion thereof which represents agricultural land; and

(*c*) by any such authority, committee, or council in relation to any other prescribed information.

(2) For the purpose of the returns, statements showing the gross estimated rental and rateable value of the agricultural land in a parish, and, in the case of any hereditament separately valued which consists in part of agricultural land and in part of buildings or other hereditaments, of each such part, shall be made by the overseers of every parish, and corrected by the assessment committee, and sent to the surveyor of taxes, and be subject to objection or appeal by the said surveyor and overseers before the assessment committee, and the justices in special sessions, and the court of quarter sessions, and subject to the right of any aggrieved ratepayer to be heard upon the said appeal, in such form, within such times, and generally in such manner, and subject to such provisions, as may be prescribed. These provisions shall conform as nearly as circumstances will permit to the existing statutory law respecting valuation lists, as regards notices, rights to inspect and take extracts, the hearing of objections, and otherwise.

(3) The Local Government Board may by order make regulations for the purpose of this section, and also generally for carrying into effect this Act, and those regulations shall be laid before both Houses of Parliament, and if neither House of Parliament within ten days passes a resolution adverse to the said order, they shall be binding in law until varied in the same manner, shall have effect as if they were enacted in this Act, and shall amongst other matters provide—

(*a*) for fixing, with the concurrence of the Treasury, for the purpose of the division in the statements of agricultural land from buildings or other hereditaments, the minimum gross estimated rental and rateable value of the buildings or other hereditaments;

(*b*) for giving effect to a notice of objection or appeal by the surveyor of taxes unless it is proved that such notice is unfair or incorrect;

(*c*) for the temporary adoption by the county council or any other council, of the division in the return between the total rateable value of agricultural land and that of buildings and other hereditaments;

(*d*) for the alteration of the valuation list in accordance with the statements as finally settled and sending copies of the returns to spending authorities and for applying and adapting any statutory form or procedure respecting the valuation list or poor rate; and

(*e*) for adapting this Act to cases where there is no valuation list, or where a sum is raised by rate from an area not a parish.

(4) The regulations may also provide fines for the breach thereof not exceeding forty shillings, or in case of any continuing offence not exceeding forty shillings a day during the continuance of the offence, and any such fine may be recovered as a crown debt or to an amount not exceeding one hundred pounds before a court of summary jurisdiction.

7. (1) Where the spending authority are a school board for a school district which is a parish, or the surveyors of highways, the amount which otherwise would be payable under this Act to the spending authority may be paid to the guardians of the poor law union in which the parish is situate, and, if so paid, shall be paid or credited by them to the spending authority.

(2) Every sum paid under this Act out of the Local Taxation Account to any spending authority in respect of any rate, shall, for the purpose of its application, of account, and of audit, be deemed to have been raised by the said rate.

(3) For the purposes of section ninety-seven of the Elementary Education Act, 1870, any amount paid or credited under this Act out of the local taxation account to a school board shall be deemed to have been actually paid by the rating authority, and the amount which would have been raised or been produced by a rate of threepence in the pound on the rateable value shall be calculated in like manner as if this Act had not passed.

8. A limit imposed by any enactment on a rate shall be construed as being only a limit on the amount to be raised by that rate, and where by that limit or otherwise the sum to be raised or expended by a local authority is limited by any enactment by reference to a rate, the limit shall be varied so as to enable the local authority to raise or expend the same sum as they might have done if this Act had not passed, and in the case of a spending authority receiving any sum paid under this Act out of the local taxation account in respect of such rate that sum shall be deemed to be part of the sum raised thereby.

9. In this Act, unless the context otherwise requires:—

The expression "rate" means a rate made during the continuance of this Act, the proceeds of which are applicable to public local purposes, and which is leviable on the basis of an assessment in respect of the yearly value of property, and includes any sum which, though obtained in the first instance by a precept, certificate, or other instrument requiring payment from some authority or officer, is or can be ultimately raised out of a rate as before defined:

The expression "rateable value" in the case of the county rate, or any other rate, levied according to any annual value not being rateable value as stated in the valuation list, means that annual value:

The expression "valuation list" means a valuation list under the Union Assessment Committee Acts, 1862 and 1864, or, in the metropolis, under the Valuation (Metropolis) Act, 1869:

The expression "spending authority" means any of the local authorities in England mentioned in the schedule to this Act:

The expression "occupier" includes owner where the owner is rated in place of the occupier:

The expression "Local Taxation Account" has the same meaning as in the Local Government Act, 1888:

The expression "prescribed" means prescribed by order of the Local Government Board:

The expression "agricultural land" means any land used as arable, meadow, or pasture ground only, cottage gardens exceeding one quarter of an acre, market gardens, nursery grounds, orchards, or allotments, but does not include land occupied together with a house as a park, gardens, other than as aforesaid, pleasure-grounds, or any land kept or preserved mainly or exclusively for purposes of sport or recreation, or land used as a racecourse:

The expression "cottage" means a house occupied as a dwelling by a person of the labouring classes:

The expression "year" means the local financial year, that is to say, the twelve months beginning on the first day of April, or where the spending authority do not make up their accounts to that day on the nearest day thereto to which they do make up their accounts, or on any other prescribed day.

10. This Act may be cited as the Agricultural Rates Act, 1896.

SCHEDULE.

Spending Authorities.

County councils, councils of county boroughs, councils of boroughs and other urban districts and of rural districts, boards of guardians, the receiver of the metropolitan police district, school boards, highway boards, surveyors of highways.

NATIONAL INCOME AND EXPENDITURE.

An Account of the Public Income and Expenditure of the United Kingdom of Great Britain and Ireland in the Year ended March 31, 1896, presented to Parliament pursuant to Act 17 and 18 Vict., c. 94, s. 2.

INCOME.

	£	s.	d.	£	s.	d.
Customs				20,756,000	0	0
Excise				26,800,000	0	0
Estate Duties				11,600,000	0	0
Stamps (excluding Fee, &c., Stamps)				7,350,000	0	0
Land Tax and House Duty				2,510,000	0	0
Property and Income Tax				16,100,000	0	0
Post Office				11,380,000	0	0
Telegraph Service				2,840,000	0	0
Crown Lands (Net)				415,000	0	0
Suez Canal Share—Receipts, &c.				689,524	18	4
Miscellaneous—						
Allowance out of the Profits of Issue received from the Bank of England, per Act 24 Vict., c. 3	175,378	13	0			
Mint, Seignorage on Silver, &c.	236,566	16	11			
Fee, &c., Stamps	831,071	7	1			
Other Miscellaneous Receipts	290,287	13	3			
				1,533,304	10	3
Total Income				£101,973,829	8	7

EXPENDITURE.

CONSOLIDATED FUND SERVICES.

	£	s.	d.	£	s.	d.
National Debt Services—						
Inside the Permanent or Fixed Annual Charge.						
Funded Debt—						
Interest and Management	16,286,721	6	3			
Terminable Annuities (including Trustee Savings Banks Deficiency Annuity)	6,442,138	0	8			
Interest on Unfunded Debt	118,367	2	1			
New Sinking Fund	2,152,773	11	0			
				25,000,000	0	0
Outside the Permanent or Fixed Annual Charge.						
Other Consolidated Fund Services—						
Civil List	408,022	3	6			
Annuities and Pensions	305,311	10	11			
Salaries and Allowances	81,276	10	9			
Courts of Justice	515,713	14	7			
Miscellaneous Charges	291,033	4	6			
				1,601,357	4	3

SUPPLY SERVICES.

	£	s.	d.	£	s.	d.
Army	18,459,800	0	0			
Ordnance Factories	200	0	0			
Navy	19,724,000	0	0			
Civil Services	19,800,000	0	0			
Customs and Inland Revenue Departments	2,702,000	0	0			
Post Office	7,018,000	0	0			
Telegraph Service	2,744,000	0	0			
Packet Service	715,000	0	0			
				71,163,000	0	0
Total Expenditure				97,764,357	4	3
Excess of Income over Expenditure				4,209,472	4	4
				£101,973,829	8	7

IMPORT DUTIES IN THE UNITED KINGDOM.

TABLE showing the several Articles *subject to* Import Duties *in the* United Kingdom, *and the* Rate *of* Duty *levied upon each* Article, *according to the* Tariff *in operation in the year 1894–95.*

Articles.		Rates of Duty.		
		£	s.	d.
Cocoa	per lb.	0	0	1
Husks and Shells	per cwt.	0	2	0
Cocoa or Chocolate, ground, prepared, or in any way manufactured	per lb.	0	0	2
Coffee	per cwt.	0	14	0
Kiln-dried, roasted, or ground	per lb.	0	0	2
Chicory:—				
Raw or kiln-dried	per cwt.	0	13	3
Roasted or ground	per lb.	0	0	2
Chicory (or other vegetable substances) and Coffee, roasted and ground; mixed	,,	0	0	2
Fruit—Dried:—				
Currants	per cwt.	0	2	0
Figs and Fig Cake, Plums, Prunes, and Raisins	,,	0	7	0
Tea	per lb.	0	0	4
Tobacco—Manufactured:—				
Cigars	,,	0	5	0
Cavendish or Negro-head	,,	0	4	6
Cavendish or Negro-head Manufactured in Bond	,,	0	4	0
Other Manufactured Tobacco	,,	0	4	0
Snuff containing more than 13lbs. of moisture in every 100lbs. weight thereof	,,	0	3	9
Snuff not containing more than 13lbs. of moisture in every 100lbs. weight thereof	,,	0	4	6
Tobacco—Unmanufactured:—				
Containing 10lbs. or more of moisture in every 100lbs. weight thereof	,,	0	3	2
Containing less than 10lbs. of moisture in every 100lbs. weight thereof	,,	0	3	6
Wine:—				
Not exceeding 30° of Proof Spirit	per gallon.	0	1	0
Exceeding 30° but not exceeding 42° of Proof Spirit	,,	0	2	6
And for every degree or part of a degree beyond the highest above charged, an additional duty	,,	0	0	3
The word "degree" does not include fractions of the next higher degree.				
Wine includes Lees of Wine.				
Additional duty on Sparkling Wine imported in Bottle		0	2	0

IMPORT DUTIES IN THE UNITED KINGDOM.

Articles.		Rates of Duty.		
		£	s.	d.
Import Duties to countervail Excise Duty on British Beer.				
Beer of the descriptions called Mum, Spruce, or Black Beer, and Berlin White Beer, and other preparations, whether fermented or not fermented, of a character similar to Mum, Spruce, or Black Beer, where the worts thereof were, before fermentation, of a specific gravity—				
Not exceeding 1,215°	per every 36 galls.	1	8	0
Exceeding 1,215°	”	1	12	10
Beer of any other description where the worts thereof were, before fermentation, of a special gravity of 1,055°	”	0	7	0
And so on in proportion for any difference in gravity.				
Import Duties to countervail Excise Duty upon British Spirits.				
Spirits or Strong Waters:				
For every gallon, computed at hydrometer proof, of Spirits of any description (except Perfumed Spirits), including Naphtha or Methylic Alcohol, purified so as to be potable, and mixtures and preparations containing Spirits	per proof gallon.	0	10	4 and 6d. additional.
For every gallon of Perfumed Spirits	per gallon.	0	16	6 and 9d. additional.
Liqueurs, Cordials, or other preparations containing Spirits, in Bottle, entered in such a manner as to indicate that the strength is not to be tested. And so on in proportion for any less quantity.	”	0	14	0 and 8d. additional.
Spirits, Methylated, in Bond	”	0	0	4
Chloroform	per lb.	0	3	1
Chloral Hydrate	”	0	1	3
Collodion	per gallon.	1	5	0
Cocoa or Chocolate, in the manufacture of which Spirit has been used	per lb.	0	0	0½
Confectionery, in the manufacture of which Spirit has been used (the duty being in addition to any other existing duty to which such Confectionery is at present liable)	”	0	0	0½
Ether, Acetic	”	0	1	10
Ether, Butyric	per gallon.	0	15	8
Ether, Sulphuric	”	1	6	2
Ethyl, Iodide of	”	0	13	7
And so on in proportion for any less quantity.				
Soap, Transparent, in the manufacture of which Spirit has been used	per lb.	0	0	3
Cards, Playing	per doz. packs.	0	3	9

Note as to Articles charged with Import Duties:—In this Return, sub-divisions of Articles of a similar nature, and subject to the same rate of duty, are classed under one head. The total number of Articles and sub-divisions of Articles in the English Tariff of Import Duties was 53 in May, 1875, as compared with 397 in 1859, and 1,046 in 1840.

INCOME TAX RATES FROM ITS FIRST IMPOSITION IN 1842 TO THE PRESENT TIME.

From and to April 5th.	Income free under.	On £100 to £150.	On £100 and upw'ds.	Chancellor of the Exchequer.	Premier.
	£	Rate in the £.			
1842 to 1846	150	—	7d.	Henry Goulburn.	Sir Robert Peel.
1846 ,, 1852	Do.	—	7d.	Sir Charles Wood.	Lord John Russell.
1852 ,, 1853	Do.	—	7d.	Benjamin Disraeli.	Earl of Derby.
1853 ,, 1854	100	5d.	7d.	William E. Gladstone.	Earl of Aberdeen.
1854 ,, 1855	Do.	10d.	1s. 2d.	Do.	Do.
1855 ,, 1857	Do.	11½d.	1s. 4d.	Sir G. Cornewall Lewis.	Viscount Palmerston.
1857 ,, 1858	Do.	5d.	7d.	Do.	Do.
1858 ,, 1859	Do.	5d.	5d.	Do.	Do.
1859 ,, 1860	Do.	6½d.	9d.	Benjamin Disraeli.	Earl of Derby.
1860 ,, 1861	Do.	7d.	10d.	William E. Gladstone.	Viscount Palmerston.
1861 ,, 1863	*100	6d.	9d.	Do.	Do.
1863 ,, 1864	Do.	7d.		Do.	Do.
1864 ,, 1865	Do.	6d.		Do.	Do.
1865 ,, 1866	Do.	4d.		Do.	Do.
1866 ,, 1867	Do.	4d.		Do.	Earl Russell.
1867 ,, 1868	Do.	5d.		Benjamin Disraeli.	Earl of Derby.
1868 ,, 1869	Do.	6d.		George Ward Hunt.	Benjamin Disraeli.
1869 ,, 1870	Do.	5d.		Robert Lowe.	William E. Gladstone.
1870 ,, 1871	Do.	4d.		Do.	Do.
1871 ,, 1872	Do.	6d.		Do.	Do.
1872 ,, 1873	Do.	4d.		Do.	Do.
1873 ,, 1874	Do.	3d.		Do.	Do.
1874 ,, 1876	Do.	2d.		Sir Stafford Northcote.	Benjamin Disraeli.
1876 ,, 1878	†150	3d.		Do.	Earl of Beaconsfield.
1878 ,, 1880	Do.	5d.		Do.	Do.
1880 ,, 1881	Do.	6d.		William E. Gladstone.	William E. Gladstone.
1881 ,, 1882	Do.	5d.		Do.	Do.
1882 ,, 1883	Do.	6½d.		Do.	Do.
1883 ,, 1884	Do.	5d.		Hugh C. E. Childers.	Do.
1884 ,, 1885	Do.	6d.		Do.	Do.
1885 ,, 1886	Do.	8d.		Sir M. Hicks-Beach.	Marquis of Salisbury.
1886 ,, 1887	Do.	8d.		Sir William Harcourt.	William E. Gladstone.
1886 ,,	Do.	8d.		Lord Rand. Churchill.	Marquis of Salisbury.
1887 ,, 1888	Do.	7d.		G. J. Goschen.	Do.
1888 ,, 1889	Do.	6d.		Do.	Do.
1889 ,, 1890	Do.	6d.		Do.	Do.
1890 ,, 1891	Do.	6d.		Do.	Do.
1891 ,, 1892	Do.	6d.		Do.	Do.
1892 ,, 1893	Do.	6d.		Sir W. Harcourt.	William E. Gladstone.
1893 ,, 1894	Do.	7d.		Do.	Do.
1894 ,, 1895	‡160	8d.		Do.	Earl Rosebery.
1895 ,, 1896	Do.	8d.		Sir M. Hicks-Beach.	Marquis of Salisbury.
1896 ,, 1897	Do.	8d.		Do.	Do.

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* Differential rate upon scale of incomes abolished. Incomes under £100 are exempt; and incomes of £100 and under £199 per annum have an abatement from the assessment of £60:—thus, £100 pays on £40; £160 upon £100; £199 upon £139; but £200 pays on £200.

† Under £150 exempt; if under £400 the tax is not chargeable upon the first £120.

‡ Under £160 exempt; if under £400 the tax is not chargeable upon the first £160; above £400 and up to £500, an abatement of £100.

AVERAGE PRICE PER £100 *of the* THREE PER CENT CONSOLIDATED STOCK *of the* PUBLIC FUNDS *of the* UNITED KINGDOM, *in* EACH MONTH *in* EACH YEAR *from* 1880 *to* 1888, *and of the* NEW TWO-AND-THREE-QUARTER PER CENT CONSOLIDATED STOCK MONTHLY *from* MARCH, 1888, *to* DECEMBER, 1895.

									New $2\frac{3}{4}$ per cent Consolidated Stock.							
MONTHS.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
January....	$97\frac{3}{4}$	$98\frac{5}{8}$	$99\frac{15}{16}$	$101\frac{1}{2}$	$101\frac{4}{5}$	$99\frac{3}{4}$	$99\frac{4}{5}$	$100\frac{3}{4}$	$102\frac{4}{5}$	..	$98\frac{1}{5}$	$97\frac{1}{5}$	$96\frac{3}{4}$	$95\frac{3}{4}$	$98\frac{1}{8}$	$98\frac{13}{16}$	$104\frac{1}{2}$
February ..	$98\frac{1}{8}$	$98\frac{15}{16}$	$99\frac{7}{8}$	$102\frac{1}{4}$	$101\frac{1}{3}$	$99\frac{1}{4}$	$100\frac{4}{5}$	$100\frac{3}{4}$	$102\frac{2}{5}$	..	99	$97\frac{1}{3}$	$97\frac{1}{8}$	$95\frac{3}{4}$	$98\frac{3}{4}$	$99\frac{1}{2}$	$104\frac{3}{8}$
March	$97\frac{7}{8}$	$99\frac{3}{4}$	$100\frac{7}{8}$	$102\frac{1}{8}$	$101\frac{9}{10}$	$97\frac{2}{3}$	$100\frac{7}{10}$	$101\frac{2}{5}$	$101\frac{4}{5}$	$100\frac{5}{8}$	$97\frac{4}{5}$	$97\frac{1}{4}$	$97\frac{9}{16}$	$95\frac{3}{4}$	$98\frac{3}{16}$	$99\frac{5}{8}$	$104\frac{1}{2}$
April	$98\frac{5}{8}$	$100\frac{13}{16}$	$101\frac{5}{8}$	$102\frac{3}{8}$	$102\frac{1}{3}$	$96\frac{1}{4}$	$100\frac{3}{5}$	$102\frac{2}{5}$	101	$100\frac{1}{16}$	$98\frac{1}{2}$	98	$96\frac{1}{16}$	$96\frac{5}{16}$	99	100	$105\frac{1}{16}$
May	$99\frac{1}{4}$	$102\frac{5}{16}$	102	$101\frac{7}{8}$	$101\frac{1}{2}$	$99\frac{1}{4}$	$101\frac{2}{5}$	$103\frac{1}{8}$	$101\frac{1}{5}$	$99\frac{1}{4}$	99	$98\frac{1}{5}$	$95\frac{1}{4}$	$97\frac{1}{2}$	$98\frac{9}{16}$	$100\frac{9}{16}$	$105\frac{15}{16}$
June	$98\frac{3}{8}$	$100\frac{3}{8}$	$100\frac{1}{4}$	$100\frac{1}{2}$	$100\frac{1}{16}$	$99\frac{3}{4}$	$100\frac{9}{10}$	$101\frac{5}{6}$	$100\frac{1}{2}$	$99\frac{9}{16}$	$98\frac{1}{5}$	$97\frac{1}{5}$	$95\frac{1}{16}$	$96\frac{3}{4}$	99	$101\frac{3}{16}$	$106\frac{1}{2}$
July	$98\frac{3}{8}$	$101\frac{1}{8}$	$99\frac{13}{16}$	$99\frac{13}{16}$	$100\frac{1}{3}$	$99\frac{7}{8}$	$101\frac{3}{10}$	$101\frac{3}{5}$	$100\frac{1}{2}$	$99\frac{9}{16}$	$98\frac{3}{5}$	$96\frac{1}{5}$	$95\frac{3}{4}$	$96\frac{13}{16}$	99	$101\frac{9}{16}$	$107\frac{5}{16}$
August	$97\frac{1}{2}$	$100\frac{1}{4}$	$99\frac{3}{4}$	$99\frac{7}{8}$	$100\frac{3}{5}$	100	$101\frac{1}{10}$	$101\frac{1}{2}$	$100\frac{1}{4}$	$99\frac{3}{8}$	$98\frac{1}{10}$	$96\frac{1}{4}$	96	$97\frac{1}{8}$	98	$102\frac{1}{8}$	$107\frac{7}{16}$
September..	$97\frac{3}{4}$	$99\frac{1}{8}$	$99\frac{7}{8}$	$100\frac{5}{8}$	$101\frac{1}{6}$	$100\frac{1}{8}$	$100\frac{9}{10}$	$101\frac{3}{10}$	$100\frac{2}{5}$	98	97	$95\frac{2}{5}$	$94\frac{15}{16}$	97	$98\frac{3}{4}$	$102\frac{3}{16}$	$107\frac{5}{8}$
October	$98\frac{9}{16}$	$98\frac{15}{16}$	$101\frac{3}{16}$	$101\frac{1}{4}$	$100\frac{9}{10}$	$100\frac{3}{8}$	$100\frac{4}{5}$	$102\frac{2}{5}$	$100\frac{2}{5}$	$97\frac{1}{4}$	97	$94\frac{3}{5}$	$94\frac{7}{8}$	97	$98\frac{1}{16}$	$101\frac{1}{2}$	$107\frac{7}{16}$
November ..	$99\frac{15}{16}$	$100\frac{1}{4}$	$102\frac{1}{16}$	$101\frac{11}{16}$	$100\frac{1}{2}$	$100\frac{1}{2}$	$101\frac{3}{5}$	$103\frac{1}{6}$	101	97	97	$94\frac{3}{5}$	95	$97\frac{1}{4}$	$98\frac{1}{4}$	$102\frac{3}{4}$	$106\frac{3}{8}$
December ..	$98\frac{3}{4}$	$99\frac{5}{16}$	$100\frac{13}{16}$	$100\frac{1}{2}$	$99\frac{1}{3}$	100	$100\frac{1}{2}$	$101\frac{7}{10}$	$99\frac{3}{5}$	$96\frac{7}{16}$	$97\frac{1}{5}$	$95\frac{3}{5}$	$95\frac{1}{4}$	$97\frac{3}{8}$	$98\frac{1}{16}$	$103\frac{1}{8}$	$106\frac{11}{16}$
Average for the year..	$98\frac{3}{8}$	100	$100\frac{1}{2}$	$101\frac{3}{16}$	101	$99\frac{1}{3}$	$100\frac{4}{5}$	$101\frac{4}{5}$	101	..	98	$96\frac{1}{3}$	$95\frac{3}{4}$	$96\frac{11}{16}$	$98\frac{1}{2}$	$101\frac{1}{16}$	$106\frac{1}{6}$

Average Minimum Rate per Cent of Discount Charged by the Bank of England in each Month in each Year from 1880 to 1895.

Months.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	Months.
Jan.	3	$3\frac{5}{16}$	$5\frac{1}{16}$	$4\frac{3}{4}$	3	5	$3\frac{3}{5}$	5	$3\frac{2}{5}$	$4\frac{1}{10}$	6	4	$3\frac{1}{3}$	$2\frac{9}{10}$	3	2	Jan.
Feb.	3	$3\frac{1}{4}$	$5\frac{13}{16}$	$3\frac{3}{4}$	$3\frac{11}{28}$	5	$2\frac{4}{7}$	4	$2\frac{2}{5}$	3	$5\frac{4}{7}$	3	3	$2\frac{1}{2}$	$2\frac{3}{8}$	2	Feb.
March. . .	3	3	4	3	$3\frac{6}{31}$	$3\frac{55}{62}$	2	$3\frac{1}{2}$	$2\frac{1}{8}$	3	$4\frac{1}{3}$	3	3	$2\frac{1}{2}$	2	2	March.
April. . . .	3	3	3	3	$2\frac{1}{2}$	$3\frac{1}{2}$	2	$2\frac{2}{3}$	2	$2\frac{3}{5}$	$3\frac{2}{5}$	$3\frac{1}{4}$	$2\frac{1}{2}$	$2\frac{1}{2}$	2	2	April.
May. . . .	3	$2\frac{1}{2}$	3	$3\frac{11}{16}$	$2\frac{1}{2}$	$2\frac{23}{31}$	$2\frac{1}{5}$	2	$2\frac{3}{5}$	$2\frac{1}{2}$	3	$4\frac{1}{2}$	2	$3\frac{1}{2}$	2	2	May.
June. . . .	$2\frac{3}{4}$	$2\frac{1}{2}$	3	4	$2\frac{1}{3}$	2	$2\frac{3}{5}$	2	$2\frac{3}{5}$	$2\frac{1}{2}$	$3\frac{1}{6}$	$3\frac{2}{3}$	2	3	2	2	June.
July. . . .	$2\frac{1}{2}$	$2\frac{1}{2}$	3	4	2	2	$2\frac{1}{2}$	2	$2\frac{1}{2}$	$2\frac{1}{2}$	4	$2\frac{1}{2}$	2	$2\frac{1}{2}$	2	2	July.
August. .	$2\frac{1}{2}$	$2\frac{15}{16}$	$3\frac{13}{16}$	4	2	2	$2\frac{3}{5}$	$2\frac{4}{5}$	$2\frac{4}{5}$	3	$4\frac{2}{3}$	$2\frac{1}{2}$	2	4	2	2	August.
Sept. . . .	$2\frac{1}{2}$	4	$4\frac{7}{16}$	$3\frac{13}{16}$	2	2	$3\frac{1}{2}$	4	$3\frac{3}{5}$	$4\frac{1}{10}$	$4\frac{1}{5}$	$2\frac{3}{5}$	2	$4\frac{1}{4}$	2	2	Sept.
Oct.	$2\frac{1}{2}$	$3\frac{3}{16}$	5	3	$2\frac{5}{6}$	2	$3\frac{3}{5}$	4	5	5	5	3	$2\frac{2}{5}$	3	2	2	October.
Nov.	$2\frac{1}{2}$	5	5	3	$4\frac{5}{6}$	$2\frac{19}{30}$	4	4	5	5	$5\frac{1}{5}$	4	3	3	2	2	Nov.
Dec.	$2\frac{7}{8}$	5	5	3	5	$3\frac{15}{31}$	$4\frac{1}{2}$	4	5	5	$5\frac{1}{10}$	$3\frac{2}{3}$	3	3	2	2	Dec.
Average for the year. .	$2\frac{3}{4}$	$3\frac{1}{2}$	$4\frac{1}{8}$	$3\frac{9}{16}$	$2\frac{19}{20}$	3	3	$3\frac{1}{3}$	$3\frac{1}{5}$	$3\frac{1}{2}$	$4\frac{1}{2}$	$3\frac{1}{3}$	$2\frac{1}{2}$	$3\frac{1}{20}$	$2\frac{1}{9}$	2	Average for the year.

DEALINGS WITH LAND.

SCALE OF LAW COSTS ON THE SALE, PURCHASE, OR MORTGAGE OF REAL PROPERTY, HOUSES, OR LAND.

	For the 1st £1,000.			For the 2nd and 3rd £1,000.			For the 4th and each subsequent £1,000 up to £10,000.			For each subsequent £1,000 up to £100,000.*		
	Per £100.			Per £100.			Per £100.			Per £100.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Vendor's solicitor for negotiating a sale of property by private contract	1	0	0	1	0	0	0	10	0	0	5	0
Do., do., for conducting a sale of property by public auction, including the conditions of sale—												
When the property is sold	1	0	0	0	10	0	0	5	0	0	2	6
When the property is not sold, then on the reserve price†	0	10	0	0	5	0	0	2	6	0	1	3
Do., do., for deducing title to freehold, copyhold, or leasehold property, and perusing and completing conveyance (including preparation of contract or conditions of sale, if any)	1	10	0	1	0	0	0	10	0	0	5	0
Purchaser's solicitor for negotiating a purchase of property by private contract	1	0	0	1	0	0	0	10	0	0	5	0
Do., do., for investigating title to freehold, copyhold, or leasehold property, and preparing and completing conveyance (including perusal and completion of contract, if any)	1	10	0	1	0	0	0	10	0	0	5	0
Mortgagor's solicitor for deducing title to freehold, copyhold, or leasehold property, perusing mortgage, and completing	1	10	0	1	0	0	0	10	0	0	5	0
Mortgagee's solicitor for negotiating loan	1	0	0	1	0	0	0	5	0	0	2	6
Do., do., for investigating title to freehold, copyhold, or leasehold property, and preparing and completing mortgage	1	10	0	1	0	0	0	10	0	0	5	0

Vendor's or mortgagor's solicitor for procuring execution and acknowledgment of deed by a married woman, £2. 10s. extra.

Where the prescribed remuneration would amount to less than £5 the prescribed remuneration is £5, except on transactions under £100, in which case the remuneration of the solicitor for the vendor, purchaser, mortgagor, or mortgagee is £3.

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* Every transaction exceeding £100,000 to be charged for as if it were for £100,000.

† A minimum charge of £5 to be made whether a sale is effected or not.

Scale of Law Costs as to Leases, or Agreements for Leases, at Rack Rent (other than a Mining Lease, or a Lease for Building Purposes, or Agreement for the same).

LESSOR'S SOLICITOR FOR PREPARING, SETTLING, AND COMPLETING LEASE AND COUNTERPART.

Where the rent does not exceed £100, £7. 10s. per cent on the rental, but no less in any case than £5.

Where the rent exceeds £100, and does not exceed £500, £7. 10s. in respect of the first £100 of rent, and £2. 10s. in respect of each subsequent £100 of rent.

Where the rent exceeds £500, £7. 10s. in respect of the first £100 of rent, £2. 10s. in respect of each £100 of rent up to £500, and £1 in respect of every subsequent £100.

Lessee's solicitor for perusing draft and completing—one-half of the amount payable to the lessor's solicitor.

Scale of Law Costs as to Conveyances in Fee, or for any other Freehold Estate reserving rent, or Building Leases reserving rent, or other Long Leases not at Rack Rent (except Mining Leases), or Agreements for the same respectively.

VENDOR'S OR LESSOR'S SOLICITOR FOR PREPARING, SETTLING, AND COMPLETING CONVEYANCE AND DUPLICATE, OR LEASE AND COUNTERPART.

Amount of Annual Rent.	Amount of Remuneration.
Where it does not exceed £5..	£5.
Where it exceeds £5, and does not exceed £50	The same payment as on a rent of £5, and also 20 per cent on the excess beyond £5.
Where it exceeds £50, but does not exceed £150	The same payment as on a rent of £50, and 10 per cent on the excess beyond £50.
Where it exceeds £150	The same payment as on a rent of £150, and 5 per cent on the excess beyond £150.

Where a varying rent is payable the amount of annual rent is to mean the largest amount of annual rent.

Purchaser's or lessee's solicitor for perusing draft and completing—one-half of the amount payable to the vendor's or lessor's solicitor.

RAILWAY ACCIDENTS.

PROPORTION OF PASSENGERS KILLED AND INJURED FROM CAUSES BEYOND THEIR OWN CONTROL.

THE FOLLOWING STATEMENT SHOWS THE PROPORTION OF PASSENGERS RETURNED AS KILLED AND INJURED FROM CAUSES BEYOND THEIR OWN CONTROL, IN PASSENGER-JOURNEYS, FOR THE YEARS 1874 TO 1895:—

YEAR.	Number of Passengers Killed and Injured from causes beyond their own control, from Accidents to Trains.		Number of Passenger Journeys (exclusive of Journeys by Season-ticket Holders).	Proportion returned as Killed and Injured (from causes beyond their own control) to number carried.	
	Killed.	Injured.		Killed.	Injured.
1874	86	1,613	477,840,411	1 in 5,556,284	1 in 296,243
1875	17	1,212	506,975,234	1 in 29,882,073	1 in 418,296
1876	38	1,279	538,287,295	1 in 14,165,455	1 in 420,865
1877	11	664	551,593,654	1 in 50,144,876	1 in 830,713
1878	24	1,173	565,024,455	1 in 23,542,685	1 in 481,692
1879	*75	602	562,732,890	1 in 7,503,105	1 in 934,772
1880	29	904	603,885,025	1 in 20,823,586	1 in 668,013
1881	23	987	622,160,000	1 in 27,050,435	1 in 630,354
1882	18	803	654,838,295	1 in 36,379,905	1 in 815,489
1883	11	662	683,718,137	1 in 62,156,194	1 in 1,032,806
1884	31	864	694,991,860	1 in 22,419,092	1 in 804,338
1885	6	436	697,213,031	1 in 116,202,171	1 in 1,599,112
1886	8	615	725,584,390	1 in 90,698,049	1 in 1,179,812
1887	25	538	733,670,000	1 in 29,346,800	1 in 1,363,699
1888	11	594	742,830,000	1 in 67,530,000	1 in 1,250,555
1889	†88	†1,016	775,183,073	1 in 8,808,875	1 in 762,975
1890	18	496	817,744,046	1 in 45,430,224	1 in 1,648,677
1891	5	875	845,463,668	1 in 169,092,733	1 in 966,244
1892	21	601	864,435,388	1 in 41,163,589	1 in 1,438,328
1893	17	484	873,177,052	1 in 51,363,356	1 in 1,804,084
1894	16	347	911,412,926	1 in 56,963,307	1 in 2,626,550
1895	5	399	929,770,909	1 in 185,954,182	1 in 2,330,253

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* Including 72 persons lost in the Tay Bridge disaster in the year 1879.

† Including 80 killed and 262 injured in a collision near Armagh. Number of season tickets issued in 1894, 1,185,000.

THE DEATH DUTIES.

ESTATE DUTY.

This duty, which in the case of persons dying after the 1st August, 1894, takes the place of the old Probate Account and Estate Duties, is now regulated by the Finance Act, 1894.

It is payable on the principal value of all property (save in a few exceptional cases), whether real or personal, settled or not settled, which passes on death.

The rates of duty (which in case of real estate may be paid by instalments) are as follow:—

Principal Net Value of Estate.				Rate Per Cent.
Above	£100,	but not above	£500	1
,,	500	,, ,,	1,000	2
,,	1,000	,, ,,	10,000	3
,,	10,000	,, ,,	25,000	4
,,	25,000	,, ,,	50,000	4½
,,	50,000	,, ,,	75,000	5
,,	75,000	,, ,,	100,000	5½
,,	100,000	,, ,,	150,000	6
,,	150,000	,, ,,	250,000	6½
,,	250,000	,, ,,	500,000	7
,,	500,000	,, ,,	1,000,000	7½
,,	1,000,000			8

Fractions of £10 capital are to count as £10 with a liability to pay duty accordingly.

Where the net value of the estate (real and personal) does not exceed £100, no duty is payable.

Where the gross value of the estate (real and personal) exceeds £100, but does not exceed £300, the duty is only 30s., and where it exceeds £300, but does not exceed £500, only 50s.

Where the property is settled, an extra duty known as Settlement Estate Duty is in certain cases payable at the rate of 1 per cent.

Debts and funeral expenses are deducted before calculating the duty, except where the gross value of the estate does not exceed £500, and it is desired to pay the fixed duty of 30s. or 50s., as the case may be, instead of the *ad valorem* duty.

THE DEATH DUTIES.

LEGACY DUTY.

This duty is regulated by 55 Geo. III., cap. 184, 51 Vict., cap. 8, and the Finance Act, 1894, and is payable in respect of personal estate (including proceeds of sale of real estate) passing on death, either under a will or in case of intestacy.

The rates of duty are as follow:—

Description of Legatee.	Rate of Duty.
Children of the deceased and their descendants, or the father or mother or any lineal ancestor of the deceased or the husbands or wives of any such persons	£1 per cent.
Brothers and sisters of the deceased and their descendants, or the husbands or wives of any such persons	£3 ,,
Brothers and sisters of the father or mother of the deceased and their descendants, or the husbands or wives of any such persons	£5 ,,
Brothers and sisters of a grandfather or grandmother of the deceased and their descendants, or the husbands or wives of any such persons	£6 ,,
Any person in any other degree of collateral consanguinity or strangers in blood to the deceased	£10 ,,

SUCCESSION DUTY.

This duty is regulated by 16 and 17 Vict., cap. 51, 51 Vict., cap. 8, and the Finance Act, 1894, and is payable in respect of real estate (including leaseholds) passing on death, and in certain cases in respect of settled personal estate.

The rates of duty are as follow:—

Description of Successor.	Rate of Duty.
Lineal issue or lineal ancestor of the predecessor, or the husband or wife of any such person....................	£1 per cent.
Brothers and sisters of the predecessor and their descendants, or the husbands or wives of any such persons	£3 ,,
Brothers and sisters of the father or mother of the predecessor and their descendants, or the husbands or wives of any such persons	£5 ,,
Brothers and sisters of a grandfather or grandmother of the predecessor and their descendants, or the husbands or wives of any such persons	£6 ,,
Persons of more remote consanguinity, or strangers in blood..	£10 ,,

THE DEATH DUTIES.

NOTE.—Where the duty under the foregoing tables is at the rate of £1 per cent, an extra duty at the rate of 10s. per cent, and in all other cases an extra duty at the rate of £1. 10s. per cent, is leviable in respect of legacies payable out of or charged on real estate (not including leaseholds) and of successions to real estate (not including leaseholds) on deaths between the 1st July, 1888, and the 2nd August, 1894.

The husband or wife of deceased is exempt from legacy or succession duty.

Legacy duty is payable on the capital value, while succession duty is in certain cases payable on the capital value, and in other cases payable on the value of an annuity equal to the net income of the property, calculated according to the age of the successor.

Where the whole net value of the estate does not exceed £1,000, no legacy, succession, or settlement estate duty is payable.

All pecuniary legacies, residues, or shares of residue, although not of the amount of £20, are subject to duty.

In case of persons dying leaving issue, the estate duty covers all legacy and succession duty which would formerly have been paid by such issue.

In case of persons dying domiciled in the United Kingdom, legacy duty is payable on all movable property wherever situate.

In case of persons dying domiciled abroad, no legacy duty is payable on movable property.

* * *

RULES BY WHICH THE PERSONAL ESTATES OF PERSONS DYING INTESTATE ARE DISTRIBUTED.

If the Intestate die, leaving	*His representatives take in the proportion following:—*
Wife and child, or children	One-third to wife, rest to child or children; and if children are dead, then to the representatives (that is, their lineal descendants), except such child or children, not heirs-at-law, who had estate by settlement of intestate, or were advanced by him in his lifetime, equal to other shares.
Wife only, no relations	Up to £500, all to wife; all above the first £500, in each case, half to wife, rest to Crown.
Wife, no near relations	Up to £500, all to wife; all above the first £500, in each case, half to wife, rest to next-of-kin in equal degree to intestate, or their legal representatives.
No wife or child	All to next-of-kin and their legal representatives.
No wife, but child, children, or representatives of them, whether such child or children by one or more wives.	All to him, her, or them.
Children by two wives	Equally to all.
If no child, children, or representatives of them	All to next-of-kin in equal degree to intestate.
Child, and grandchild by deceased child	Half to child, half to grandchild, who takes by representation.
Husband	Whole to him.
Father, and brother or sister	Whole to father.
Mother, and brother or sister	Whole to them equally.
Wife, mother, brothers, sisters, and nieces (daughters of deceased brother or sister)	Up to £500, all to wife; all above the first £500, in each case, half to wife, residue to mother, brothers, sisters, and nieces.
Wife, and father	Up to £500, all to wife; all above the first £500, in each case, half to wife, and half to father.
Wife, brothers or sisters, and mother	Up to £500, all to wife; all above the first £500, in each case, half to wife, half to brothers or sisters and mother.
Mother, but no wife, child, father, brother, sister, nephew, or niece	The whole to mother.
Wife, and mother	Up to £500, all to wife; all above the first £500, in each case, half to wife, half to mother.

RULES BY WHICH THE PERSONAL ESTATES OF PERSONS DYING INTESTATE ARE DISTRIBUTED—*continued.*

If the Intestate die, leaving	*His representatives take in the proportion following:—*
Brother or sister of whole blood, and brother or sister of half blood	Equally to both.
Posthumous brother or sister, and mother	Equally to both.
Posthumous brother or sister, and brother or sister born in lifetime of father	Equally to both.
Father's father and mother's mother	Equally to both.
Uncle or aunt's children, and brother or sister's grandchildren	Equally to all.
Grandmother uncle, or aunt	All to grandmother.
Two aunts, nephew and niece	Equally to all.
Uncle, and deceased uncle's child	All to uncle.
Uncle by mother's side, and deceased uncle or aunt's child	All to uncle.
Nephew by brother, and nephew by half-sister	Equally *per capita.**
Nephew by deceased brother, and nephews and nieces by deceased sister	Each in equal shares *per capita*, and not *per stirpes.*
Brother, and grandfather	Whole to brother.
Brother's grandson, and brother or sister's daughter	All to brother or sister's daughter.
Brother, and two aunts	All to brother.
Brother, and wife	Up to £500, all to wife; all above the first £500, in each case, half to brother, half to wife.
Wife, mother, and children of a deceased brother (or sister)	Up to £500, all to wife; all above the first £500, in each case, half to wife, a fourth to mother, and a fourth *per stirpes* to deceased brother's or sister's children.
Wife, brother, or sister, and children of a deceased brother or sister	Up to £500, all to wife; all above the first £500, in each case, half to wife, one-fourth to brother or sister, one-fourth to deceased brother's or sister's children *per stirpes.*
Brother or sister, and children of a deceased brother or sister	Half to brother or sister, half to children of deceased brother or sister *per stirpes.*
Grandfather, no nearer relation	All to grandfather.

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* That is, taking individually, and not by representation. Thus, if A die, leaving three brothers or sisters, they each take an equal part of his effects in his or her own right. But if either of them die, leaving children, his children would take his share *per stirpes*, that is *through him*, and not in their own rights.

By the Act 19 and 20 Vict., cap. 94, all special *local* customs relating to the estates of intestates are abolished so far as they affect personal property.

RULES OF DIVISION, ACCORDING TO THE LAW OF SCOTLAND, OF THE MOVABLE ESTATE OF A PERSON WHO HAS DIED INTESTATE.

If a person die, leaving	*His movable estate is divided in the following proportions:—*
Wife	Half to wife, other half to deceased's next-of-kin.
Wife and child, or children	One-third to wife, remaining two-thirds to child, or among children equally.
Wife and children, and issue of predeceasing children	One-third to wife, one-third to children equally, and the remaining third between the children and the issue of the predeceasing children—the children taking *per capita*, the latter *per stirpes*.*
Wife and grandchildren	Half to wife, and half to grandchildren equally among them.
Wife, and his children by former marriages	One-third to wife, two-thirds to children equally.
Wife, and her children by last and prior marriages	One-third to wife, remaining two-thirds to *deceased's* children.
Children	Whole to children.
Children, and issue of predeceasing children	Half to children, remaining half between children *per capita*, and issue *per stirpes*.
Grandchildren	Equally to all.
Children by two or more marriages	Equally to all.
Father	Whole to father.
Mother	One-third to mother, other two-thirds to next-of-kin.

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* *Per capita*, *i.e.*, by the head; *per stirpes* (by descent), *i.e.*, through their parent and not in their own right. Where property divides *per capita*, it is divided into as many shares as there are children; where *per stirpes*, the share which would have fallen to the predeceasing parent if alive is divided equally among his children.

RULES OF DIVISION, ACCORDING TO THE LAW OF SCOTLAND, OF THE MOVABLE ESTATE OF A PERSON WHO HAS DIED INTESTATE—*continued.*

If a person die, leaving	*His movable estate is divided in the following proportions:—*
Father and mother	Whole to father.
Father and mother, and brothers and sisters	Half to father, half to brothers and sisters equally.
Mother, and brothers and sisters	One-third to mother, remaining two-thirds to brothers and sisters.
Father, mother, brothers, or sisters, and issue of deceased brothers or sisters	Half to father, half to brothers and sisters *per capita*, and issue *per stirpes.*
Mother, brothers, or sisters, and issue of deceased brothers or sisters	One-third to mother, remaining two-thirds as in last example.
Father and mother, and their grandchildren	Half to father, other half to grandchildren equally.
Mother, and her grandchildren	One-third to mother, other two-thirds to grandchildren equally.
Father, mother, children, and grandchildren of deceased brothers or sisters	Half to father, other half between children *per capita*, and grandchildren *per stirpes.*
Mother, children, and grandchildren of deceased brothers or sisters	One-third to mother, other two-thirds among children *per capita*, and grandchildren *per stirpes.*
Brothers or sisters	Equally among them.
Brothers or sisters, and nephews or nieces	Brothers or sisters *per capita*, nephews or nieces *per stirpes.*
Nephews or nieces	Equally.
Grandnephews or nieces	Equally.
Brothers or sisters of full blood, and brothers or sisters of half-blood	Whole to brothers and sisters of full blood.
Brothers or sisters consanguinean (that is, by same father but not same mother) and brothers or sisters uterine (that is, by same mother but not by same father)	Whole to brothers and sisters consanguinean.

RULES OF DIVISION, ACCORDING TO THE LAW OF SCOTLAND, OF THE MOVABLE ESTATE OF A PERSON WHO HAS DIED INTESTATE—*continued*.

If a person die, leaving	*His movable estate is divided in the following proportions:—*
Brothers or sisters consanguinean, and uncles or aunts	Whole to brothers and sisters.
Brothers and sisters uterine, and uncles or aunts	Half to brothers and sisters, other half to uncles and aunts.
Father, mother, and uncles and aunts	Whole to father.
Father, and cousins of full blood	Whole to father.
Mother, and uncles or aunts	One-third to mother, two-thirds to uncles and aunts.
Mother, and cousins of full blood	One-third to mother, two-thirds to cousins equally.
Grandfather, and uncles and aunts	Whole to uncles and aunts.
Grandfather, grandmother, and mother	One-third to mother, two-thirds to grandfather.

Where a wife dies, survived by	*Her movable estate is divided in the following proportions:*
Husband	Half to husband, other half to next-of-kin.
Husband and children	One-third to husband, rest to children.
Children only	Whole to children.
Children, and issue of deceased children	Half to children, other half among children *per capita*, and issue *per stirpes*.
Children by two or more marriages	Equally to all.

Illegitimate children do not succeed to their father and mother, when the latter leave no will in their favour. When an illegitimate child dies without a will, and leaves neither wife nor children, his estate falls to the Crown.

LOSS OF LIFE AT SEA.

RETURN TO THE BOARD OF TRADE SHOWING THE LIVES LOST BY WRECK, DROWNING, OR OTHER ACCIDENT IN BRITISH MERCHANT SHIPS REGISTERED IN THE UNITED KINGDOM.

CALENDAR YEAR 1895.

—	Masters and Seamen employed. (1.)	Lives Lost. Drowned. Masters and Seamen lost by Wrecks and Casualties. (2.)	Masters and Seamen lost when Vessel was not damaged. (3.)	Total. (4.)	Masters and Seamen lost by Accident other than Drowning. (5.)	Total Number lost by Drowning and other Accident. (6.)
Sailing	56,095	685	243	928	101	1,029
Steam	162,129	370	304	674	139	813
Total	218,224	1,055	547	1,602	240	1,842

—	Percentages and Proportions. Lives lost by Drowning of Persons employed. (7.)	Lives lost by Drowning and other Accident of Persons employed. (8.)	Total number of lives lost in Merchant Ships Registered in the United Kingdom. Crew. (9.)	Passengers (lost by Wreck only). (10.)	Total. (11.)
Sailing........	1·65 or 1 in 60	1·83 or 1 in 55	1,029	21	1,050
Steam	·42 or 1 in 241	·50 or 1 in 199	813	34	847
Total	·73 or 1 in 136	·84 or 1 in 118	1,842	55	1,897

EXPECTATION OF LIFE.

Expectation of Life Tables were constructed by the late Dr. Farr, of the General Register Office, and were calculated on the death-rates of 1838-54; but since that time very important changes have occurred in the death-rates at different ages; and, consequently, new tables have been constructed by Dr. W. Ogle, who succeeded Dr. Farr, on the basis of the death-rates of 1871-80. The following table gives the results both of the older and the later calculations; the first two columns in the male and female parts, respectively, giving the survivors at each year of life out of a million born of the corresponding sex, by the older and the newer calculation, and the two other columns giving similarly the expectation of life at each year.

AGE.	MALES.				FEMALES.				AGE.
	Of 1,000,000 Born, the Number Surviving at the end of each Year of Life.		Mean After-lifetime (Expectation of Life).		Of 1,000,000 Born, the Number Surviving at the end of each Year of Life.		Mean After-lifetime (Expectation of Life).		
	1838–54.	1871–80.	1838–54.	1871–80.	1838–54.	1871–80.	1838–54.	1871–80.	
Column.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	Column.
0	1,000,000	1,000,000	39·91	41·35	1,000,000	1,000,000	41·85	44·62	0
1	836,405	841,417	46·65	48·05	865,288	871,266	47·31	50·14	1
2	782,626	790,201	48·83	50·14	811,711	820,480	49·40	52·22	2
3	754,849	763,737	49·61	50·86	782,990	793,359	50·20	52·99	3
4	736,845	746,587	49·81	51·01	764,060	775,427	50·43	53·20	4
5	723,716	734,068	49·71	50·87	750,550	762,622	50·33	53·08	5
6	713,881	726,815	49·39	50·38	740,584	755,713	50·00	52·56	6
7	706,156	721,103	48·92	49·77	732,771	750,276	49·53	51·94	7
8	699,688	716,309	48·37	49·10	726,116	745,631	48·98	51·26	8
9	694,346	712,337	47·74	48·37	720,537	741,727	48·35	50·53	9
10	689,857	708,990	47·05	47·60	715,769	738,382	47·67	49·76	10
11	685,982	706,146	46·31	46·79	711,581	735,405	46·95	48·96	11
12	682,512	703,595	45·54	45·96	707,770	732,697	46·20	48·13	12
13	679,256	701,200	44·76	45·11	704,155	730,122	45·44	47·30	13
14	676,057	698,840	43·97	44·26	700,581	727,571	44·66	46·47	14

15	672,776	696,419	43·18	43·41	696,917	724,956	43·90	45·63	15
16	669,296	693,695	42·40	42·58	693,050	722,084	43·14	44·81	16
17	665,529	690,746	41·64	41·76	688,894	718,993	42·40	44·00	17
18	661,402	687,507	40·90	40·96	684,378	715,622	41·67	43·21	18
19	656,868	683,941	40·17	40·17	679,463	711,946	40·97	42·43	19
20	651,903	680,033	39·48	39·40	674,119	707,949	40·29	41·66	20
21	646,502	675,769	38·80	38·64	668,345	703,616	39·63	40·92	21
22	641,028	671,344	38·13	37·89	662,474	699,141	38·98	40·18	22
23	635,486	666,754	37·46	37·15	656,509	694,521	38·33	39·44	23
24	629,882	661,997	36·79	36·41	650,463	689,759	37·68	38·71	24
25	624,221	657,077	36·12	35·68	644,342	684,858	37·04	37·98	25
26	618,503	651,998	35·44	34·96	638,148	679,822	36·39	37·26	26
27	612,731	646,757	34·77	34·24	631,891	674,661	35·75	36·54	27
28	606,906	641,353	34·10	33·52	625,575	669,372	35·10	35·83	28
29	601,026	635,778	33·43	32·81	619,201	663,959	34·46	35·11	29
30	595,089	630,038	32·76	32·10	612,774	658,418	33·81	34·41	30
31	589,094	624,124	32·09	31·40	606,296	652,747	33·17	33·70	31
32	583,036	618,056	31·42	30·71	599,769	646,957	32·53	33·00	32
33	576,912	611,827	30·74	30·01	593,196	641,045	31·88	32·30	33
34	570,716	605,430	30·07	29·33	586,575	635,003	31·23	31·60	34
35	564,441	598,860	29·40	28·64	579,908	628,842	30·59	30·90	35
36	558,083	592,107	28·73	27·96	573,192	622,551	29·94	30·21	36
37	551,634	585,167	28·06	27·29	566,431	616,144	29·29	29·52	37
38	545,084	578,019	27·39	26·62	559,619	609,599	28·64	28·83	38
39	538,428	570,656	26·72	25·96	552,758	602,924	27·99	28·15	39
40	531,657	563,077	26·06	25·30	545,844	596,113	27·34	27·46	40
41	524,761	555,254	25·39	24·65	538,876	589,167	26·69	26·78	41
42	517,734	547,288	24·73	24·00	531,849	582,101	26·03	26·10	42
43	510,567	539,161	24·07	23·35	524,765	574,919	25·38	25·42	43
44	503,247	530,858	23·41	22·71	517,617	567,612	24·72	24·74	44

EXPECTATION OF LIFE—*continued.*

AGE.	MALES.				FEMALES.				AGE.
	Of 1,000,000 Born, the Number Surviving at the end of each Year of Life.		Mean After-lifetime (Expectation of Life).		Of 1,000,000 Born, the Number Surviving at the end of each Year of Life.		Mean After-lifetime (Expectation of Life).		
	1838-54.	1871 80.	1838-54.	1871-80.	1838-54.	1871-80.	1838-54.	1871-80.	
Column.	1	2	3	4	5	6	7	8	Column.
45	495,770	522,374	22·76	22·07	510,403	560,174	24·06	24·06	45
46	488,126	513,702	22·11	21·44	503,122	552,602	23·40	23·38	46
47	480,308	504,836	21·46	20·80	495,768	544,892	22·74	22·71	47
48	472,306	495,761	20·82	20·18	488,339	537,043	22·08	22·03	48
49	464,114	486,479	20·17	19·55	480,833	529,048	21·42	21·36	49
50	455,727	476,980	19·54	18·93	473,245	520,901	20·75	20·68	50
51	447,139	467,254	18·90	18·31	465,572	512,607	20·09	20·01	51
52	438,099	457,022	18·28	17·71	457,814	504,188	19·42	19·34	52
53	428,801	446,510	17·67	17·12	449,966	495,645	18·75	18·66	53
54	419,256	435,729	17·06	16·53	442,047	486,973	18·08	17·98	54
55	409,460	424,677	16·45	15·95	433,331	477,440	17·43	17·33	55
56	399,408	413,351	15·86	15·37	424,239	467,443	16·79	16·69	56
57	389,088	401,740	15·26	14·80	414,761	456,992	16·17	16·06	57
58	378,481	389,827	14·68	14·24	404,895	446,079	15·55	15·45	58
59	367,570	377,591	14·10	13·68	394,636	434,695	14·94	14·84	59
60	356,330	365,011	13·53	13·14	383,974	422,835	14·34	14·24	60
61	344,744	352,071	12·96	12·60	372,895	410,477	13·75	13·65	61
62	332,789	338,820	12·41	12·07	361,387	397,644	13·17	13·08	62
63	320,451	325,256	11·87	11·56	349,436	384,319	12·60	12·51	63
64	307,720	311,368	11·34	11·05	337,031	370,495	12·05	11·96	64
65	294,588	297,156	10·82	10·55	324,165	356,165	11·51	11·42	65
66	281,064	282,638	10·32	10·07	310,833	341,326	10·98	10·90	66
67	267,160	267,829	9·83	9·60	297,048	325,988	10·47	10·39	67
68	252,901	252,763	9·36	9·14	282,819	310,170	9·97	9·89	68
69	238,328	237,487	8·90	8·70	268,177	293,899	9·48	9·41	69

70	223,490	222,056	8·45	8·27	253,161	277,225	9·02	8·95	70
71	208,453	206,539	8·03	7·85	237,822	260,207	8·57	8·50	71
72	193,297	190,971	7·62	7·45	222,230	242,934	8·13	8·07	72
73	178,114	175,449	7·22	7·07	206,464	225,497	7·71	7·65	73
74	163,003	160,074	6·85	6·70	190,620	208,003	7·31	7·25	74
75	148,076	144,960	6·49	6·34	174,800	190,566	6·93	6·87	75
76	133,453	130,227	6·15	6·00	159,126	173,316	6·56	6·51	76
77	119,251	115,986	5·82	5·68	143,722	156,392	6·21	6·16	77
78	105,592	102,359	5·51	5·37	128,711	139,927	5·88	5·82	78
79	92,587	89,449	5·21	5·07	114,229	124,065	5·56	5·50	79
80	80,343	77,354	4·93	4·79	100,394	108,935	5·26	5·20	80
81	68,946	66,153	4·66	4·51	87,323	94,662	4·98	4·90	81
82	58,471	55,842	4·41	4·26	75,119	81,305	4·71	4·63	82
83	48,970	46,489	4·17	4·01	63,862	68,966	4·45	4·37	83
84	40,471	38,132	3·95	3·58	53,615	57,723	4·21	4·12	84
85	32,979	30,785	3·73	3·56	44,419	47,631	3·98	3·88	85
86	26,476	24,436	3·53	3·36	36,284	38,710	3·76	3·66	86
87	20,926	19,054	3·34	3·17	29,202	30,958	3·56	3·46	87
88	16,268	14,576	3·16	2·99	23,135	24,338	3·36	3·26	88
89	12,428	10,926	3·00	2·82	18,027	18,788	3·18	3·08	89
90	9,321	8,015	2·84	2·66	13,802	14,225	3·01	2·90	90
91	6,859	5,748	2·69	2·51	10,376	10,553	2·85	2·74	91
92	4,946	4,025	2·55	2·37	7,650	7,658	2·70	2·58	92
93	3,492	2,749	2·41	2·24	5,526	5,429	2·55	2·44	93
94	2,411	1,828	2·29	2·12	3,908	3,756	2·42	2·30	94
95	1,628	1,183	2·17	2·01	2,704	2,533	2·29	2·17	95
96	1,071	742	2·06	1·90	1,827	1,661	2·17	2·11	96
97	688	452	1·95	1·81	1,204	1,057	2·06	2·03	97
98	430	266	1·85	1·72	774	653	1·96	1·83	98
99	262	151	1·76	1·65	483	389	1·86	1·73	99
100	154	82	1·68	1·61	295	225	1·76	1·62	100

THE QUEEN AND ROYAL FAMILY.

THE QUEEN.—Victoria, of the United Kingdom of Great Britain and Ireland, &c., Queen, Defender of the Faith. Her Majesty was born at Kensington Palace, May 24, 1819; succeeded to the throne, June 20, 1837, on the death of her uncle, King William IV.; was crowned June 28, 1838; and married, February 10, 1840, to his Royal Highness Prince Albert. Her Majesty is the only child of his late Royal Highness Edward, Duke of Kent, son of King George III. The children of Her Majesty are:—

1. Her Royal Highness Victoria Adelaide Mary Louisa, Princess Royal of England and Prussia, born November 21, 1840, and married to his Royal Highness Wilhelm of Prussia, January 25, 1858, died June 15, 1888, and has had issue three sons and four daughters.

2. His Royal Highness Albert Edward, Prince of Wales, born November 9, 1841, married March 10, 1863, Alexandra of Denmark (Princess of Wales), born December 1, 1844, and has issue—Prince Albert Victor, born January 8, 1864, died January 14, 1892; George Frederick Ernest Albert, Duke of York, born June 3, 1865, married his cousin Princess Victoria May, only daughter of the Duke of Teck, July 6, 1893, has a son born June 23, 1894; Louisa Victoria Alexandra Dagmar, born February 20, 1867, married, July 27, 1889, Alexander William George, Duke of Fife, has two daughters, born October 3, 1891, and April 3, 1893; Victoria Alexandra Olga Mary, born July 6, 1868; Maud Charlotte Mary Victoria, born November 26, 1869; and Alexander John Charles Albert, born April 6, 1871, died April 7, 1871.

3. Her Royal Highness Alice Maud Mary, born April 25, 1843; died December 14, 1878; married his Royal Highness Prince Frederick Louis of Hesse, July 1, 1862, who died March 13, 1892; had issue five daughters and two sons; the second son died by an accident, May, 1873; the youngest daughter died November 15, 1878.

4. His Royal Highness Alfred Ernest Albert, Duke of Saxe-Coburg and Gotha, born August 6, 1844; married the Grand Duchess Marie of Russia, January 9, 1874; and has had issue a son, born October 15, 1874, and four daughters, born October 29, 1875, November 25, 1876, September 1, 1878, and March, 1884.

5. Her Royal Highness Helena Augusta Victoria, born May 25, 1846; married to his Royal Highness Prince Frederick Christian Charles Augustus of Schleswig-Holstein Sonderburg-Augustenburg, July 5, 1866; and has issue living two sons and two daughters.

6. Her Royal Highness Louise Caroline Alberta, born March 18, 1848; married to the Marquis of Lorne, eldest son of the Duke of Argyll, March 21, 1871.

7. His Royal Highness Arthur William Patrick Albert, Duke of Connaught and Strathearn, born May 1, 1850; married Princess Louise Margaret of Prussia, March 13, 1879; issue, a daughter, born January 15, 1882; a son, born January 13, 1883; and a daughter, born March 17, 1886.

8. His Royal Highness Leopold George Duncan Albert, Duke of Albany, born April 7, 1853; married, April 27, 1882, Princess Helen of Waldeck; died March 28, 1884; issue, a daughter, born February 26, 1883, and a son, born July 19, 1884.

9. Her Royal Highness Beatrice Mary Victoria Feodora, born April 14, 1857; married, July 23, 1885, to Prince Henry of Battenberg; issue, three sons and a daughter.

PARLIAMENTS OF THE UNITED KINGDOM.

	Assembled.	Dissolved.	Duration.
	GEORGE III.		Yrs. m. d.
1	Sept. 27, 1796*	June 29, 1802	5 9 2
2	Oct. 29, 1802	Oct. 25, 1806	3 11 27
3	Dec. 15, 1806	April 29, 1807	0 4 14
4	June 22, 1807	Sept. 29, 1812	5 3 7
5	Nov. 24, 1812	June 10, 1818	5 6 16
6	Jan. 14, 1819	Feb. 29, 1820	1 1 15
	GEORGE IV.		
7	April 23, 1820	June 2, 1826	6 1 9
8	Nov. 14, 1826	July 24, 1830	3 8 10
	WILLIAM IV.		
9	Oct. 26, 1830	April 22, 1831	0 5 27
10	June 14, 1831	Dec. 3, 1332	1 5 9
11	Jan. 29, 1833	Dec. 30, 1834	1 11 1
12	Feb. 19, 1835	July 17, 1837	2 4 28
	VICTORIA.		Yrs. m. d.
13	Nov. 15, 1837	June 23, 1841	3 7 8
14	Aug. 19, 1841	July 23 1847	5 11 4
15	Nov. 18, 1847	July 1, 1852	4 7 13
16	Nov. 4, 1852	Mar. 21, 1857	4 4 17
17	April 30, 1857	April 23, 1859	1 11 23
18	May 31 1859	July 6, 1865	6 1 6
19	Feb. 1, 1866	Nov. 11, 1868	2 9 10
20	Dec. 10, 1868	Jan. 26, 1874	5 1 16
21	Mar. 5, 1874	Mar. 25, 1880	6 0 20
22	April 29, 1880	Nov. 18, 1885	5 6 20
23	Jan. 12, 1886	June 25, 1886	0 5 5
24	Aug. 5, 1886	June 28, 1892	5 10 24
25	Aug. 4, 1892	July 24, 1895	2 11 20
26	Aug. 12, 1895		

* Parliament first met after the Union with Ireland, January 22, 1801.

LIST OF ADMINISTRATIONS IN THE PRESENT CENTURY.

Date.	Prime Minister.	Duration.	Chancellor.	Exchequer.	Home Secretary.	Foreign Sec.
		Yrs. Dys.				
Dec. 23, 1783	William Pitt	17 84	Thurlow Loughboro	William Pitt	Portland	Grenville.
Mar. 17, 1801	Hy. Addington	3 59	Eldon	H. Addington	Portland, Pelham. C. Yorke	Hawkesbury.
May 15, 1804	William Pitt	1 272	Eldon	William Pitt	Hawkesbury	Harrowby. Mulgrave.
Feb. 11, 1806	Lord Grenville	1 48	Erskine	Lord H. Petty	Spencer	Chas. J. Fox. Visct. Howick.
Mar. 31, 1807	Duke of Portland.	2 246	Eldon	S. Perceval	Hawkesbury	G. Canning.
Dec. 2, 1809	Spencer Perceval.	2 190	Eldon	S. Perceval	R. Ryder	Bathurst. Wellesley.
June 9, 1812	Earl of Liverpool.	14 319	Eldon	N. Vansittart F. J. Robinson	Sidmouth Robert Peel	Castlereagh. G. Canning.
Apr. 24, 1827	George Canning	0 134	Lyndhurst	G. Canning	Sturges Bourne. Lansdowne	Dudley.
Sept. 5, 1827	Visct. Goderich	0 142	Lyndhurst	J. C. Herries	Lansdowne	Dudley.
Jan. 25, 1828	D. of Wellington	2 301	Lyndhurst	H. Goulburn	Robert Peel	Dudley. Aberdeen.
Nov. 22, 1830	Earl Grey	3 238	Brougham	Althorp	Melbourne	Palmerston.
July 18, 1834	Visct. Melbourne.	0 161	Brougham	Althorp	Duncannon	Palmerston.
Dec. 26, 1834	Sir Robert Peel	0 113	Lyndhurst	Sir R. Peel	H. Goulburn	Wellington.
Apr. 18, 1835	Visct. Melbourne.	6 141	In Comm. Cottenhpm.	T. S. Rice F. T. Barring.	Lord J. Russell Normanby	Palmerston.
Sept. 6, 1841	Sir Robert Peel	4 303	Lyndhurst	H. Goulburn	Sir J. Graham	Aberdeen.
July 6, 1846	Ld. John Russell.	5 236	Cottenham Truro	Sir C. Wood	Sir George Grey	Palmerston. Granville.
Feb. 27, 1852	Earl of Derby	0 305	St Leonards	B. Disraeli	S. H. Walpole	Malmesbury.
Dec. 28, 1852	Earl of Aberdeen.	2 44	Cranworth	W. Gladstone	Palmerston	Lord J. Russell. Clarendon.
Feb. 10, 1855	Lord Palmerston.	3 15	Cranworth	W. Gladstone Sir G. C. Lewis.	Sir George Grey	Clarendon.
Feb. 25, 1858	Earl of Derby	1 113	Chelmsford.	B. Disraeli	S. H. Walpole	Malmesbury.
June 18, 1859	Lord Palmerston.	6 141	Campbell Westbury	W. Gladstone	Sir G. C. Lewis Sir George Grey	Russell.
Nov. 6, 1865	Earl Russell	0 242	Cranworth	W. Gladstone	Sir George Grey	Clarendon.
July 6, 1866	Earl of Derby	1 236	Chelmsford.	B. Disraeli	S. H. Walpole Gathorne Hardy	Stanley.
Feb. 27, 1868	Benjamin Disraeli	0 285	Cairns	G. W. Hunt	G. Hardy	Stanley.
Dec. 9, 1868	W. E. Gladstone	5 74	Hatherley Selborne	Robert Lowe W. E. Gladstone.	H. A. Bruce Robert Lowe	Clarendon. Granville.
Feb. 21, 1874	Benjamin Disraeli Earl Beaconsfield.	6 67	Cairns	S. Northcote	R. A. Cross	Derby. Salisbury.
Apr. 28, 1880	W. E. Gladstone	5 57	Selborne	W. Gladstone H. C. E. Childers	Sir W. Harcourt	Granville.
June 24, 1885	Marq. of Salisbury	0 227	Halsbury	Hicks-Beach	R. A. Cross	Salisbury.
Feb. 7, 1886	W. E. Gladstone	0 139	Herschel	W. V. Harcourt	H. C. E. Childers	Rosebery.
July 24, 1886	Marq. of Salisbury	6 17	Halsbury	Lord Churchill G. J. Goschen	H. Matthews	Iddesleigh. Salisbury.
Aug. 15, 1892 Mar. 3, 1894	W. E. Gladstone Earl of Rosebery	2 313	Herschel	W. V. Harcourt	H. H. Asquith	Rosebery. Kimberley.
June 24, 1895	Marq. of Salisbury		Halsbury	Hicks-Beach	Sir M. W. Ridley	Salisbury.

THE SALISBURY MINISTRY, 1895.

Prime Minister and Secretary of State for Foreign Affairs	Marquis of Salisbury.
Lord President of the Council	Duke of Devonshire.
First Lord of the Treasury	Rt. Hon. A. J. Balfour.
Lord Chancellor	Lord Halsbury.
Secretary for India	Lord G. Hamilton.
Chancellor of the Exchequer	Sir M. Hicks-Beach.
Home Secretary	Sir Matthew White Ridley.
Secretary for the Colonies	Rt. Hon. J. Chamberlain.
Secretary for War	Marquis of Lansdowne.
Secretary for Scotland	Lord Balfour of Burleigh.
First Lord of the Admiralty	Rt. Hon. G. J. Goschen.
President of the Board of Trade	Rt. Hon. C. T. Ritchie.
Chancellor of the Duchy of Lancaster	Lord James.
Lord Privy Seal	Viscount Cross.
President of the Local Government Board	Rt. Hon. Henry Chaplin.
Lord Lieutenant of Ireland	Earl Cadogan.
Lord Chancellor of Ireland	Lord Ashbourne.
President of the Board of Agriculture	Rt. Hon. W. Long.
First Commissioner of Works	Rt. Hon. Akers Douglas.

The above form the Cabinet.

Chief Secretary for Ireland	G. Balfour.
Postmaster-General	Duke of Norfolk.
Vice-President of the Council	Sir John E. Gorst.
Junior Lords of the Treasury	H. T. Anstruther. W. Hayes Fisher. Lord Stanley.
Financial Secretary to the Treasury	Rt. Hon. R. W. Hanbury.
Patronage Secretary to the Treasury	Sir Wm. Walrond.
Under Secretary for the Home Department	Jesse Collings.
Under Secretary for Foreign Affairs	Hon. George Curzon.
Under Secretary for the Colonies	Earl of Selborne.
Under Secretary for India	Earl of Onslow.
Parliamentary Secretary of the Board of Trade	Earl of Dudley.
Parliamentary Secretary of the Local Government Board	T. W. Russell.

THE SALISBURY MINISTRY, 1895—*continued.*

Secretary to the Admiralty	W. E. G. Macartney.
Under Secretary for the War Office	Hon. W. St. J. Brodrick.
Financial Secretary to the War Office	Powell Williams.
Civil Lord to the Admiralty	Austen Chamberlain.
Attorney-General	Sir R. Webster.
Solicitor-General	Sir C. Scott Dickson.
Lord Advocate for Scotland	Rt. Hon. Sir C. Pearson.
Solicitor-General for Scotland	A. G. Murray.
Attorney-General for Ireland	Rt. Hon. John Atkinson.
Solicitor-General for Ireland	W. Kenny.
Vice-Chamberlain of the Household	Hon. Alwyn Fellowes.
Comptroller of the Household	Lord Arthur Hill.
Lord Chamberlain	Earl of Lathom.

PRIME MINISTERS SINCE 1834.

Sir Robert Peel	December 15, 1834
Viscount Melbourne	April 18, 1835
Sir Robert Peel	August 31, 1841
Lord John Russell	July 6, 1846
Earl of Derby	February 27, 1852
Earl of Aberdeen	December 28, 1852
Viscount Palmerston	February 26, 1855
Earl of Derby	February 26, 1858
Viscount Palmerston	June 18, 1859
Earl Russell	October 28, 1865
Earl of Derby	July 8, 1866
Mr. Disraeli	March to December, 1868
Mr. Gladstone	December 9, 1868
Earl Beaconsfield	February 21, 1874
Mr. Gladstone	April 29, 1880 and Ch. of Ex. to April, 1883.
Marquis of Salisbury	June 24, 1885
Mr. Gladstone	February 2, 1886
Marquis of Salisbury	August 3, 1886
Mr. Gladstone	August 15, 1892
Earl Rosebery	March 3, 1894
Marquis of Salisbury	June 25, 1895

Twenty changes of Governments have taken place since the beginning of 1834, but in that time only ten men have been Premiers, and of these Mr. Gladstone, the Marquis of Salisbury, and Earl Rosebery are the sole survivors. Mr. Gladstone has been Premier longer than any other statesman since the Earl of Liverpool, who held office nearly fifteen years in succession.

In 1885 the number of members of the Lower House was finally fixed at 670, as against 658 in previous years; England returning 465, Wales 30, Scotland 72, and Ireland 103 members. The previous distribution had been—England 469, Wales 30, Scotland 60, and Ireland 103 seats. There are now 377 county members, as against 283; 284 borough members, as against 360; and 9 University members, as against 9.

THE

HOUSE OF COMMONS AS ELECTED JULY, 1895.

WITH CORRECTIONS TO DECEMBER 5TH, 1896.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	
BEDFORD (3).							
County Divisions (2).							
Biggleswade, or N.	Lord A. Compton	..	..	1	..	..	64,457
Luton, or S.	T. G. Ashton	..	1	..	..	..	68,249
		..	1	1	..	..	132,706
Borough (1).							
Bedford	G. Pym	1	..	..	..	..	28,023
		1	1	1	..	..	160,729
BERKS. (5).							
County Divisions (3).							
Abingdon, or N.	A. K. Lloyd	1	..	..	..	..	49,077
Newbury, or S.	W. G. Mount	1	..	..	..	..	55,846
Wokingham, or E.	Sir George Russell	1	..	..	..	..	59,104
		3	..	..	..	..	164,027
Boroughs (2).							
Reading	C. T. Murdock	1	..	..	..	..	55,752
Windsor (New)	F. T. Barry	1	..	..	..	..	12,327
		5	..	..	..	..	232,106
BUCKS. (3).							
County Divisions (3).							
Aylesbury, or M.	Baron F. de Rothschild	..	..	1	..	..	58,510
Buckingham, or N. ..	W. W. Carlile	1	..	..	..	..	57,389
Wycombe, or S.	Viscount Curzon	1	..	..	..	..	66,792
		2	..	1	..	..	182,691
CAMBRIDGE (4).							
County Divisions (3).							
Chesterton, or W.	R. Green	1	..	..	..	..	46,041
Newmarket, or E.	H. Mc.Calmont	1	..	..	..	..	48,878
Wisbech, or N.	C. T. Giles	1	..	..	..	..	49,556
		3	..	..	..	..	144,475
Borough (1).							
Cambridge	R. U. P. Fitzgerald	1	..	..	..	..	44,387
		4	..	..	..	..	188,862

HOUSE OF COMMONS.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	
CHESTER (13).							
County Divisions (8).							
Altrincham	C. R. Disraeli	1	..	..	..	..	63,390
Crewe	Hon. R. A. Ward	1	..	..	..	..	64,434
Eddisbury	H. J. Tollemache	1	..	..	..	..	55,249
Hyde	J. W. Sidebotham	1	..	..	..	..	57,468
Knutsford	Hon. A. de T. Egerton	1	..	..	..	..	55,073
Macclesfield	W. Bromley-Davenport	1	..	..	..	..	53,147
Northwich	Sir J. T. Brunner	..	1	..	..	..	69,893
Wirrall	Colonel Cotton-Jodrell	1	..	..	..	..	73,725
		7	1	..	..	..	492,379
Boroughs (5).							
Birkenhead	Elliot Lees	1	..	..	..	..	99,249
Chester	R. A. Yerburgh	1	..	..	..	..	42,295
Stalybridge	T. H. Sidebottom	1	..	..	..	..	44,135
Stockport (2)	G. Whiteley	1	..	..	..	..	70,253
	B. V. Melville	1	..	..	..	..	
		12	1	..	..	..	748,311
CORNWALL (7).							
County Divisions (6).							
Bodmin, or S.E.	Rt. Hon. L. H. Courtney	..	..	1	..	..	52,386
Camborne, or N.W.	A. Strauss	..	..	1	..	..	54,192
Launceston, or N.E.	T. Owen	..	1	..	..	..	48,086
St. Austell, or M.	W. A. McArthur	..	1	..	..	..	49,517
St. Ives, or W.	T. B. Bolitho	..	..	1	..	..	50,160
Truro	E. Lawrence	..	..	1	..	..	50,715
		..	2	4	..	..	305,056
Borough (1).							
Penryn and Falmouth.	F. J. Horniman	..	1	..	..	..	17,533
		..	3	4	..	..	322,589
CUMBERLAND (6).							
County Divisions (4).							
Cockermouth	Sir Wilfrid Lawson	..	1	..	..	..	63,592
Egremont, or W.	H. Duncombe	1	..	..	..	..	53,629
Eskdale, or N.	R. A. Allison	..	1	..	..	..	45,300
Penrith, or M.	J. W. Lowther	1	..	..	..	..	45,636
		2	2	..	..	..	208,157
Boroughs (2).							
Carlisle	W. C. Gully, Q.C.	..	1	..	..	..	39,176
Whitehaven	A. Helder	1	..	..	..	..	19,217
		3	3	..	..	..	266,550

HOUSE OF COMMONS.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservative	Liberal.	Liberal U.	Nationalist.	Parnellite.	
DERBY (9).							
County Divisions (*7*).							
Chesterfield	T. Bayley	..	1	..	..	..	61,294
High Peak	Captain Sidebottom	1	..	..	..	..	60,740
Ilkeston	Sir W. B. Foster	..	1	..	..	..	69,192
Mid	J. A. Jacoby	..	1	..	..	..	59,716
North-Eastern	T. D. Bolton	..	1	..	..	..	61,995
Southern	J. Gretton	1	..	..	..	..	63,816
Western	V. C. Cavendish	..	..	1	..	..	56,987
		2	4	1	..	..	433,740
Boroughs (*2*).							
Derby (2)	H. Bemrose	1	..	..	..	..	94,146
	G. Drage	1	..	..	..	..	
		4	4	1	..	..	527,886
DEVON (13).							
County Divisions (*8*).							
Ashburton, or M.	C. Seale Hayne	..	1	..	..	..	53,005
Barnstaple, or N.W.	Sir W. B. Gull	..	..	1	..	..	61,349
Honiton, or E.	Sir J. Kennaway	1	..	..	..	..	52,025
South Molton, or N.	G. Lambert	..	1	..	..	..	46,718
Tavistock, or W.	H. C. F. Luttrell	..	1	..	..	..	50,715
Tiverton, or N.E.	Sir W. Walrond	1	..	..	..	..	52,762
Torquay	Commander Philpott	1	..	..	..	..	57,463
Totnes, or S.	F. B. Mildmay	..	..	1	..	..	49,615
		3	3	2	..	..	423,652
Boroughs (*5*).							
Devonport (2)	Hudson Kearley	..	1	..	..	..	70,238
	E. J. C. Morton	..	1	..	..	..	
Exeter	Hon. Sir H. S. Northcote	1	..	..	..	..	50,570
Plymouth (2)	Sir E. Clarke	1	..	..	..	..	87,307
	C. Harrison	..	1	..	..	..	
		5	6	2	..	..	631,767
DORSET (4).							
County Divisions (*4*).							
Eastern	Hon. H. N. Sturt	1	..	..	..	..	57,202
Northern	J. K. Wingfield Digby	1	..	..	..	..	45,740
Southern	W. E. Brymer	1	..	..	..	..	49,897
Western	Colonel R. Williams	1	..	..	..	..	41,648
		4	..	..	..	..	194,487

HOUSE OF COMMONS.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	
DURHAM (16).							
County Divisions (8).							
Barnard Castle	Sir J. W. Pease	..	1	..	..	..	59,459
Bishop Auckland	J. M. Paulton	..	1	..	..	..	61,833
Chester-le-Street	Sir J. Joicey	..	1	..	..	..	70,206
Houghton-le-Spring	R. Cameron	..	1	..	..	..	69,235
Jarrow	Sir C. M. Palmer	..	1	..	..	..	80,532
Mid	J. Wilson	..	1	..	..	..	67,635
North-Western	L. Atherley-Jones	..	1	..	..	..	65,987
South-Eastern	Sir H. Havelock-Allen	..	..	1	..	..	63,830
		..	7	1	..	..	538,717
Boroughs (8).							
Darlington	A. Pease	..	..	1	..	..	38,030
Durham	M. A. Fowler	..	1	..	..	..	15,287
Gateshead	William Allan	..	1	..	..	..	85,712
Hartlepool	T. Richardson	..	..	1	..	..	64,914
South Shields	W. S. Robson	..	1	..	..	..	78,431
Stockton	J. Samuel	..	1	..	..	..	68,895
Sunderland (2)	W. T. Doxford	1	..	..	..	..	142,097
	Colonel Gourley	..	1	..	..	..	
		1	12	3	..	..	1,032,083
ESSEX (11).							
County Divisions (8).							
Chelmsford, or M.	T. Usborne	1	..	..	..	..	58,313
Epping, or W.	Colonel A. R. M. Lockwood	1	..	..	..	..	55,416
Harwich, or N.E.	J. Round	1	..	..	..	..	55,612
Maldon, or E.	C. H. Strutt	1	..	..	..	..	54,572
Romford, or S.	Alfred M. Wigram	1	..	..	..	..	103,543
Saffron Walden, or N.	C. Gold	..	1	..	..	..	47,422
South-Eastern	Major Rasch	1	..	..	..	..	69,824
Walthamstow, or S.W.	E. W. Byrne, Q.C.	1	..	..	..	..	101,236
		7	1	..	..	..	545,938
Boroughs (3).							
Colchester	Sir W. D. Pearson	..	1	..	..	..	34,559
West Ham, North	E. Gray	1	..	..	..	..	92,304
,, South	G. E. Banes	1	..	..	..	..	112,598
		9	2	..	..	..	785,399
GLOUCESTER (11).							
County Divisions (5).							
Cirencester, or E.	Hon. A. B. Bathurst	1	..	..	..	..	53,364
Forest of Dean	Rt. Hon. Sir C. Dilke	..	1	..	..	..	52,791
Stroud, or M.	C. A. Cripps	1	..	..	..	..	56,488
Tewkesbury, or N.	Sir J. E. Dorington	1	..	..	..	..	50,325
Thornbury, or S.	C. E. H. A. Colston	1	..	..	..	..	63,587
		4	1	..	..	..	276,555

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	
GLOUCESTER—*con.*							
Boroughs (*6*).							
Bristol, East	Sir W. H. Wills	..	1	..	..	..	70,685
,, North	L. Fry	..	..	1	..	..	77,172
,, South	Sir Edward Hill	1	..	..	..	..	72,273
,, West	Sir M. Hicks-Beach	1	..	..	..	..	65,481
Cheltenham	Colonel Russell	1	..	..	..	..	49,775
Gloucester	C. J. Monk	..	..	1	..	..	39,444
		7	2	2	..	..	651,385
HANTS (12).							
County Divisions (*6*).							
Andover, or W.	W. W. B. Beach	1	..	..	..	..	51.225
Basingstoke, or N.	A. F. Jeffreys	1	..	..	..	..	70,497
Fareham, or S.	Lt.-Gen. Sir F. Fitzwygram	1	..	..	..	..	65,987
Isle of Wight	Sir R. Webster	1	..	..	..	..	78,718
New Forest	Hon. J. Scott Montagu	1	..	..	..	..	51,300
Petersfield, or E.	W. Wickham	1	..	..	..	..	47,165
		6	..	..	..	..	364,892
Boroughs (*6*).							
Christchurch	Abel H. Smith	1	..	..	..	..	53,270
Portsmouth (2)	Sir John Baker	..	1	..	..	..	159,255
	W. O. Clough	..	1	..	..	..	
Southampton	Sir F. Evans	..	1	..	..	..	93,596
	Sir B. Simeon	..	..	1	..	..	
Winchester	W. H. Myers	1	..	..	..	..	19,073
		8	3	1	..	..	690,086
HEREFORD (3).							
County Divisions (*2*).							
Leominster, or N.	J. Rankin	1	..	..	..	..	45,830
Ross, or S.	M. Biddulph	..	..	1	..	..	49,889
		1	..	1	..	..	95,719
Borough (*1*).							
Hereford	C. W. R. Cooke	1	..	..	..	..	20,267
		2	..	1	..	..	115,986
HERTFORD (4).							
County Divisions (*4*).							
Hertford, or E.	A. Smith	1	..	..	..	..	54,571
Hitchin, or N.	G. B. Hudson	1	..	..	..	..	48,437
St. Albans, or M.	Vicary Gibbs	1	..	..	..	..	53,239
Watford, or W.	T. F. Halsey	1	..	..	..	..	63,878
		4	..	..	..	..	220,125

HOUSE OF COMMONS.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	
HUNTINGDON (2).							
County Divisions (2).							
Huntingdon, or S.	A. H. Smith-Barry	1	..	..	..	..	25,422
Ramsey, or N.	Hon. A. E. Fellowes	1	..	..	..	..	29,558
KENT (19).		2	..	..	..	..	54,980
County Divisions (8).							
Ashford, or S.	L. Hardy	1	..	..	..	..	67,946
Dartford, or N.W.	Rt. Hon. Sir W. Hart-Dyke	1	..	..	..	..	79,850
Faversham, or N.E.	F. G. Barnes	1	..	..	..	..	69,343
Isle of Thanet	Rt. Hon. J. Lowther	1	..	..	..	..	61,617
Medway, or M.	Major C. E. Warde	1	..	..	..	..	64,178
Sevenoaks, or W.	H. W. Forster	1	..	..	..	..	80,062
St. Augustine's, or E.	Rt. Hon. A. Akers-Douglas	1	..	..	..	..	68,011
Tunbridge, or S.W.	A. Griffith Boscawen	1	..	..	..	..	72,596
Boroughs (11).		8	..	..	..	..	563,603
Canterbury	J. Henniker-Heaton	1	..	..	..	..	22,607
Chatham	Alderman Davies	1	..	..	..	..	59,389
Deptford	C. J. Darling	1	..	..	..	..	101,326
Dover	G. Wyndham	1	..	..	..	..	33,313
Gravesend	J. D. Palmer	1	..	..	..	..	35,492
Greenwich	Lord H. Cecil	1	..	..	..	..	78,131
Hythe	Sir B. Edwards	1	..	..	..	..	35,540
Lewisham	J. Penn	1	..	..	..	..	88,643
Maidstone	Sir F. Seager-Hunt	1	..	..	..	..	32,145
Rochester	Viscount Cranborne	1	..	..	..	..	26,170
Woolwich	Colonel E. Hughes	1	..	..	..	..	98,976
LANCASTER (57).		19	..	..	..	..	1,175,335
County Divisions (23).							
Northern Part (4).							
Blackpool	Sir M. W. Ridley	1	..	..	..	..	70,356
Chorley	Lord Balcarres	1	..	..	..	..	67,854
Lancaster	Colonel Foster	1	..	..	..	..	64,279
North Lonsdale	R. Cavendish	..	..	1	..	..	51,181
N.-Eastern Part (4).							
Accrington	Sir J. F. Leese, Q.C.	..	1	..	..	..	75,712
Clitheroe	Sir U. Kay-Shuttleworth	..	1	..	..	..	89,331
Darwen	J. Rutherford	1	..	..	..	..	70,475
Rossendale	J. H. Maden	..	1	..	..	..	70,567
S.-Eastern Part (8).							
Eccles	O. L. Clare	1	..	..	..	..	78,133
Gorton	E. F. G. Hatch	1	..	..	..	..	77,690
Heywood	G. Kemp	..	..	1	..	..	56,794
Middleton	T. Fielden	1	..	..	..	..	68,540
Prestwich	F. Cawley	..	1	..	..	..	79,497
Radcliffe-c'm-Farnw'th	Colonel Mellor	1	..	..	..	..	72,940
Stretford	J. W. Maclure	1	..	..	..	..	67,004
Westhoughton	Lord Stanley	1	..	..	..	..	83,063

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Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	
LANCASTER—*con.*							
S.-Western Part (7).							
Bootle	Colonel Sandys	1	..	..	..	..	97,552
Ince	Colonel Blundell	1	..	..	..	..	67,021
Leigh	C. P. Scott	..	1	..	..	..	65,155
Newton	Hon. T. W. Legh	1	..	..	..	..	63,296
Ormskirk	Rt. Hon. A. B. Forwood	1	..	..	..	..	64,096
Southport	Hon. G. N. Curzon	1	..	..	..	..	76,581
Widnes	J. S. Gilliat	1	..	..	..	..	64,507
Boroughs (*34*).		16	5	2	..	..	1,641,624
Ashton-under-Lyne	H. Whiteley	1	..	..	..	..	47,322
Barrow-in-Furness	C. W. Cayzer	1	..	..	..	..	51,712
Blackburn (2)	W. H. Hornby	1	..	..	..	..	120,064
	W. Coddington	1	..	..	..	..	
Bolton (2)	H. Shepherd Cross	1	..	..	..	..	118,730
	G. Harwood	..	1	..	..	..	
Burnley	Rt. Hon. P. Stanhope	..	1	..	..	..	86,163
Bury	J. Kenyon	1	..	..	..	..	55,491
Liverpool, Abercromby.	W. F. Lawrence	1	..	..	..	..	55,564
,, East Toxteth	A. F. Warr	1	..	..	..	..	63,926
,, Everton	J. A. Willox	1	..	..	..	..	78,639
,, Exchange	J. C. Bigham, Q.C.	..	..	1	..	..	47,704
,, Kirkdale	Sir G. Baden-Powell	1	..	..	..	..	77,018
,, Scotland	T. P. O'Connor	..	..	..	1	..	53,723
,, Walton	J. H. Stock	1	..	..	..	..	66,465
,, West Derby	Rt. Hon. W. H. Long	1	..	..	..	..	76,971
,, West Toxteth	R. P. Houston	1	..	..	..	..	64,461
Manchester, East	Rt. Hon. A. J. Balfour	1	..	..	..	..	85,407
,, North	C. E. Schwann	..	1	..	..	..	76,629
,, N'th-East.	Rt. Hon. Sir J. Fergusson	1	..	..	..	..	72,794
,, N'th-West	Sir W. H. Houldsworth	1	..	..	..	..	67,633
,, South	Marquis of Lorne	..	..	1	..	..	80,051
,, S'th-West	W. J. Galloway	1	..	..	..	..	71,968
Oldham (2)	R. Ascroft	1	..	..	..	..	183,871
	J. F. Oswald, Q.C.	1	..	..	..	..	
Preston (2)	R. W. Hanbury	1	..	..	..	..	111,696
	W. E. M. Tomlinson	1	..	..	..	..	
Rochdale	C. M. Royds	1	..	..	..	..	71,458
Salford, North	F. Platt-Higgins	1	..	..	..	..	61,520
,, South	Sir H. H. Howorth	1	..	..	..	..	68,879
,, West	Lees Knowles	1	..	..	..	..	67,740
St. Helens	H. Seton-Karr	1	..	..	..	..	71,288
Warrington	R. Pierpoint	1	..	..	..	..	55,349
Wigan	Sir F. S. Powell	1	..	..	..	..	55,013
		44	8	4	1	..	3,906,873

HOUSE OF COMMONS.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	
LEICESTER (6).							
County Divisions (4).							
Bosworth, or W.	C. B. Mc.Laren	..	1	..	..	..	57,240
Harborough, or S.	J. W. Logan	..	1	..	..	..	59,368
Loughborough, or M...	J. E. Johnson-Ferguson	..	1	..	..	..	55,164
Melton, or E.	Lord E. Manners..........	1	..	..	..	..	59,852
		1	3	..	..	..	231,624
Boroughs (2).							
Leicester (2)........	H. Broadhurst	..	1	..	..	..	142,051
	Walter Hazell	..	1	..	..	..	
		1	5	..	..	..	373,675
LINCOLN (11).							
County Divisions (7).							
Brigg, or N. Lindsey ..	H. J. Reckitt	..	1	..	..	..	49,151
Gainsboro', or W. L'sey	E. Bainbridge	..	1	..	..	..	49,595
Horncastle, or S. L'sey.	Lord Willoughby de Eresby.	1	..	..	..	..	46,079
Louth, or E. Lindsey ..	R. W. Perks	..	1	..	..	..	46,868
Sleaford, or N. Kesteven	Rt. Hon. H. Chaplin	1	..	..	..	..	45,474
Spalding, or Holland ..	H. F. Pollock	..	..	1	..	..	49,279
Stamford, or S. Kestev'n	W. Younger	1	..	..	..	..	47,647
		3	3	1	..	..	334,093
Boroughs (4).							
Boston	W. Garfitt	1	..	..	..	..	18,927
Grantham	H. Y. B. Lopes............	1	..	..	..	..	17,170
Great Grimsby	Alderman Doughty........	..	1	..	..	..	58,603
Lincoln..............	C. H. Seeley	..	..	1	..	..	43,985
		5	4	2	..	..	472,778
MIDDLESEX (47).							
County Divisions (7).							
Brentford............	J. Bigwood	1	..	..	..	..	69,792
Ealing	Rt. Hon. Lord G. Hamilton.	1	..	..	..	..	70,756
Enfield	Captain H. F. Bowles......	1	..	..	..	..	84,388
Harrow..............	W. Ambrose	1	..	..	..	..	96,720
Hornsey	H. C. Stephens............	1	..	..	..	..	78,043
Tottenham	Joseph Howard	1	..	..	..	..	97,166
Uxbridge	Sir F. D. Dixon Hartland ..	1	..	..	..	..	67,754
		7	..	..	..	..	564,619
Boroughs (40).							
Bethnal Green, N.E...	M. H. Bhownaggre	1	..	..	..	..	66,804
,, ,, S.W...	E. H. Pickersgill	..	1	..	..	..	62,330
Chelsea..............	C. A. Whitmore	1	..	..	..	..	96,272
City of London (2) ..	Sir R. Hanson	1	..	..	..	..	37,694
	A. G. H. Gibbs	1	..	..	..	..	
Finsbury, Central	M. Mainwaring............	1	..	..	..	..	65,885

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Constituencies.	Members.	Politics. Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	Parliamentary Population, 1891.
MIDDLESEX—*con.*							
Finsbury, East	H. C. Richards	1	..	..	..	..	45,306
,, Holborn	Sir Charles Hall, Q.C.	1	..	..	..	..	70,918
Fulham	W. H. Fisher	1	..	..	..	..	91,640
Hackney, Central	Sir A. Scoble, Q.C.	1	..	..	..	..	64,760
,, North	W. R. Bousfield, Q.C.	1	..	..	..	..	77,170
,, South	T. H. Robertson	1	..	..	..	..	87,601
Hammersmith	General Goldsworthy	1	..	..	..	..	97,237
Hampstead	E. Broadie-Hoare	1	..	..	..	..	68,425
Islington, East	B. L. Cohen	1	..	..	..	..	83,883
,, North	G. C. T. Bartley	1	..	..	..	..	90,272
,, South	Sir Albert Rollitt	1	..	..	..	..	71,910
,, West	T. Lough	..	1	..	..	..	73,368
Kensington, North	W. T. Sharpe	1	..	..	..	..	82,656
,, South	Lord Warkworth	1	..	..	..	..	83,665
Marylebone, East	E. Boulnois	1	..	..	..	..	66,673
,, West	Sir H. Farquhar	..	..	1	..	..	75,708
Paddington, North	John Aird	1	..	..	..	..	64,671
,, South	T. G. Fardell	1	..	..	..	..	53,167
Shoreditch, Haggerston	J. Lowles	1	..	..	..	..	56,356
,, Hoxton	Alderman James Stuart	..	1	..	..	..	67,653
St. George's, Hn'vr-sq.	Rt. Hon. G. J. Goschen	..	..	1	..	..	78,362
St. Pancras, East	R. G. Webster	1	..	..	..	..	60,844
,, North	E. R. Moon	1	..	..	..	..	59,126
,, South	H. M. Jessel	..	..	1	..	..	53,767
,, West	H. R. Graham	1	..	..	..	..	60,700
Strand	Hon. W. F. D. Smith	1	..	..	..	..	64,674
Tower Hamlets:							
Bow and Bromley	Hon. L. Holland	1	..	..	..	..	88,645
Limehouse	H. S. Samuel	1	..	..	..	..	55,232
Mile End	Spencer Charrington	1	..	..	..	..	48,850
Poplar	Sidney Buxton	..	1	..	..	..	78,052
St. George	H. H. Marks	1	..	..	..	..	47,913
Stepney	F. W. Isaacson	1	..	..	..	..	58,715
Whitechapel	Sir Samuel Montagu	..	1	..	..	..	74,420
Westminster	W. Burdett-Coutts	1	..	..	..	..	55,760
		39	5	3	..	..	3,251,703
MONMOUTH (4).							
County Divisions (3).							
Northern	R. Mc.Kenna	..	1	..	..	..	62,690
Southern	Hon. F. C. Morgan	1	..	..	..	..	66,133
Western	Sir W. V. Harcourt	..	1	..	..	..	64,695
		1	2	..	..	..	193,518
Borough (1).							
Monmouth Group	Albert Spicer	..	1	..	..	..	58,742
		1	3	..	..	..	252,260

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Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	
NORFOLK (10).							
County Divisions (*6*).							
Eastern	R. J. Price	..	1	..	..	..	40,693
Midland	F. W. Wilson	..	1	..	..	..	49,604
Northern	H. Cozens-Hardy, Q.C.	..	1	..	..	..	51,072
North-Western	Joseph Arch	..	1	..	..	..	51,278
Southern	F. Taylor	..	..	1	..	..	49,730
South-Western	T. L. Hare	1	..	..	..	..	47,133
Boroughs (*4*).		1	4	1	..	..	289,510
Great Yarmouth	Sir J. C. Colomb	1	..	..	..	..	49,318
King's Lynn	T. Gibson Bowles	1	..	..	..	..	18,265
Norwich (2)	S. Hoare	1	..	..	..	..	100,970
	Sir H. Bullard	1	..	..	..	..	
		5	4	1	..	..	458,063
NORTHAMPTON (7).							
County Divisions (*4*).							
Eastern	F. A. Channing	..	1	..	..	..	65,499
Mid	J. Pender	1	..	..	..	..	48,790
Northern	E. P. Monckton	1	..	..	..	..	46,723
Southern	Hon. E. Douglas Pennant	1	..	..	..	..	46,628
Boroughs (*3*).		3	1	..	..	..	207,640
Northampton (2)	H. Labouchere	..	1	..	..	..	70,872
	C. G. A. Drucker	1	..	..	..	..	
Peterborough	R. Purvis	..	..	1	..	..	26,464
		4	2	1	..	..	304,976
N'RTH'MB'RL'ND (8).							
County Divisions (*4*).							
Berwick-on-Tweed	Sir Edward Grey	..	1	..	..	..	52,442
Hexham	W. C. B. Beaumont	..	1	..	..	..	51,587
Tyneside	J. A. Pease	..	1	..	..	..	69,642
Wansbeck	C. Fenwick	..	1	..	..	..	59,701
Boroughs (*4*).		..	4	..	..	..	233,372
Morpeth	Thomas Burt	..	1	..	..	..	40,133
Newcastle-on-T'ne (2)	Alderman C. F. Hamond	1	..	..	..	..	186,324
	W. D. Cruddas	1	..	..	..	..	
Tynemouth	R. S. Donkin	1	..	..	..	..	46,267
NOTTINGHAM (7).		3	5	..	..	..	506,096
County Divisions (*4*).							
Bassetlaw	Sir F. Milner	1	..	..	..	..	51,452
Mansfield	J. C. Williams	..	1	..	..	..	65,790
Newark	Hon. H. Finch Hatton	1	..	..	..	..	50,035
Rushcliffe	J. E. Ellis	..	1	..	..	..	66,617
		2	2	..	..	..	233,894

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Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	
NOTTINGHAM—*con.*							
Boroughs (*3*).							
Nottingham, East	E. Bond..................	1	..	..	..	..	69,181
,, South ..	Lord H. Bentinck	1	..	..	..	..	60,487
,, West....	J. H. Yoxall	..	1	..	..	..	82,037
		4	3	..	..	..	445,599
OXFORD (4).							
County Divisions (*3*).							
Banbury, or N.	A. Brassey	1	..	..	..	..	43,861
Henley, or S.	R. Hermon Hodge	1	..	..	..	..	48,145
Woodstock, or M.	G. H. Morrell	1	..	..	..	..	50,464
		3	..	..	..	..	142,470
Borough (*1*).							
Oxford	Viscount Valentia	1	..	..	..	..	45,741
		4	..	..	..	..	188,211
RUTLAND (1).							
County Division (*1*).							
Rutland	G. H. Finch	1	..	..	..	..	20,659
SALOP (5).							
County Divisions (*4*).							
Ludlow, or S.	R. J. More...............	..	..	1	..	..	55,920
Newport, or N.	Colonel Kenyon Slaney	1	..	..	..	..	53,035
Oswestry, or W.	Stanley Leighton..........	1	..	..	..	..	54,178
Wellington, or M.	A. H. Brown	..	..	1	..	..	46,224
		2	..	2	..	..	209,357
Borough (*1*).							
Shrewsbury	H. D. Green, Q.C.	1	..	..	..	..	26,967
		3	..	2	..	..	236,324
SOMERSET (10).							
County Divisions (*7*).		1	..	..	..	..	48,226
Bridgwater	E. J. Stanley	..	..	1	..	..	50,152
Eastern	H. Hobhouse	..	1	..	..	..	53,552
Frome	J. E. Barlow	1	..	..	..	..	53,418
Northern	E. H. Llewellyn	..	1	..	..	..	51,300
Southern	Edward Strachey	1	..	..	..	..	48,122
Wellington, or W.	Sir A. Acland-Hood........	1	..	..	..	..	55,569
Wells................	G. H. Jolliffe.............						
		4	2	1	..	..	360,339
Boroughs (*3*).							
Bath (2)............	Colonel Wyndham Murray..	1	..	..	..	..	54,550
	E. R. Wodehouse..........	..	..	1	..	..	
Taunton	Colonel Welby	1	..	..	..	..	18,026
		6	2	2	..	..	432,915

HOUSE OF COMMONS.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive.	Liberal.	Liberal U.	Nationalist.	Parnellite.	
STAFFORD (17).							
County Divisions (7).							
Burton	Sidney Evershed	..	1	..	..	..	58,640
Handsworth	Sir H. Meysey Thompson	..	..	1	..	..	84,782
Kingswinford	Rt. Hon. A. Staveley Hill	1	..	..	..	..	47,665
Leek	Charles Bill	1	..	..	..	..	56,711
Lichfield	Thos. Courtenay Warner	..	1	..	..	..	52,006
North-Western	James Heath	1	..	..	..	..	63,166
Western	Hamar A. Bass	..	..	1	..	..	56,546
		3	2	2	..	..	419,516
Boroughs (10).							
Hanley	W. Woodall	..	1	..	..	..	86,845
Newcastle-under-Lyme	W. Allen	..	1	..	..	..	54,184
Stafford	C. E. Shaw	..	1	..	..	..	20,270
Stoke-on-Trent	D. H. Coghill	..	..	1	..	..	75,352
Walsall	S. Gedge	1	..	..	..	..	71,791
Wednesbury	W D. Green	1	..	..	..	..	69,083
West Bromwich	J. Ernest Spencer	1	..	..	..	..	59,489
Wolverhampton, E.	Rt. Hon. Sir H. H. Fowler	..	1	..	..	..	54,511
,, S.	Rt. Hon. C. P. Villiers	..	..	1	..	..	57,096
,, W.	Sir A. Hickman	1	..	..	..	..	62,718
		7	6	4	..	..	1,030,855
SUFFOLK (8).							
County Divisions (5).							
Eye, or N.E.	F S. Stephenson	..	1	..	..	..	54,825
Lowestoft, or N.	H. S. Foster	1	..	..	..	..	61,654
Stowmarket, or N.W.	J. Malcolm	1	..	..	..	..	55,099
Sudbury, or S.	Cuthbert Quilter	..	..	1	..	..	55,655
Woodbridge, or S.E.	Captain Pretyman	1	..	..	..	..	56,539
		3	1	1	..	..	283,772
Boroughs (3).							
Bury St. Edmunds	Viscount Chelsea	1	..	..	..	..	16,630
Ipswich (2)	D. F. Goddard	..	1	..	..	..	57,360
	Sir C. Dalrymple	1	..	..	..	..	
		5	2	1	..	..	357,762
SURREY (22).							
County Divisions (6).							
Chertsey, or N.W.	C. H. Coombe	1	..	..	..	..	61,968
Epsom, or M.	T. T. Bucknill	1	..	..	..	..	70,103
Guildford, or S.W.	Hon. St. John Brodrick	1	..	..	..	..	67,722
Kingston	T. S. Cox	1	..	..	..	..	85,367
Reigate, or S.E.	H. Cubitt	1	..	..	..	..	64,453
Wimbledon, or N.E.	Cosmo Bonsor	1	..	..	..	..	69,236
		6	..	..	..	..	418,849

HOUSE OF COMMONS.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	
SURREY—*con.*							
Boroughs (*16*).							
Battersea	John Burns	..	1	..	..	..	97,204
Camberwell, Dulwich	J. Blundell Maple	1	..	..	..	..	83,272
,, North	Major Dalbiac	1	..	..	..	..	88,932
,, Peckham.	F. G. Banbury	1	..	..	..	..	83,482
Clapham	P. M. Thornton	1	..	..	..	..	96,952
Croydon	C. T. Ritchie	1	..	..	..	..	102,697
Lambeth, Brixton	E. Hubbard	1	..	..	..	..	70,356
,, Kennington.	F. L. Cooke	1	..	..	..	..	73,919
,, North	H. M. Stanley	..	..	1	..	..	62,516
,, Norwood	C. E. Tritton	1	..	..	..	..	68,411
Newington, Walworth.	J. Bailey	1	..	..	..	..	59,040
,, West	Captain Cecil Norton	..	1	..	..	..	56,623
Southwark, Bermondsy	A. Lafone	1	..	..	..	..	82,898
,, Rotherhithe	J. C. Macdona	1	..	..	..	..	73,662
,, West	R. K. Causton	..	1	..	..	..	66,770
Wandsworth	H. Kimber	1	..	..	..	..	113,233
		18	3	1	..	..	1,698,816
SUSSEX (9).							
County Divisions (*6*).							
Chichester, or S.W.	Lord Edmund Talbot	1	..	..	..	..	54,357
Eastbourne, or S.	Vice-Admiral E. Field	1	..	..	..	..	66,468
East Grinstead, or N.	G. J. Goschen, jun.	1	..	..	..	..	52,525
Horsham, or N.W.	J. H. Johnstone	1	..	..	..	..	52,977
Lewes, or M.	Sir H. Fletcher	1	..	..	..	..	64,026
Rye, or E.	A. M. Brookfield	1	..	..	..	..	57,090
		6	..	..	..	..	347,443
Boroughs (*3*).							
Brighton (2)	G. W. E. Loder Bruce Wentworth	1 1	.. ..	.. ..	.. ..	.. ..	142,121
Hastings	W. L. Shadwell	1	..	..	..	..	60,878
		9	..	..	..	..	550,442
WARWICK (14).							
County Divisions (*4*).							
Nuneaton, or N.E.	F. A. Newdigate	1	..	..	..	..	53,280
Rugby, or S.E.	Hon. R. G. Verney	1	..	..	..	..	49,130
Stratf'rd-on-A., or S.W.	Colonel Milward	1	..	..	..	..	46,440
Tamworth, or N.	P. A. Muntz	1	..	..	..	..	54,134
		4	..	..	..	..	202,984

HOUSE OF COMMONS.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservative.	Liberal.	Liberal U.	Nationalist.	Parnellite.	
WARWICK—*con*							
Boroughs (10).							
Aston Manor	Captain Grice-Hutchinson	1	..	..	..	..	68,639
Birm'gham, Bordesley	Jesse Collings	..	..	1	..	..	82,863
,, Central	E. Parkes	..	..	1	..	..	59,099
,, East	Sir B. Stone	1	..	..	..	..	65,683
,, Edgbaston	G. Dixon	..	..	1	..	..	67,682
,, North	Alderman Kenrick	..	..	1	..	..	62,948
,, South	J. Powell Williams	..	..	1	..	..	70,334
,, West	Rt. Hon. J. Chamberlain	..	..	1	..	..	69,508
Coventry	C. J. Murray	1	..	..	..	..	54,743
Warwick & Leamington	Hon. A. Lyttelton	..	..	1	..	..	39,102
		7	..	7	..	..	843,585
WESTMORLAND (2).							
County Divisions (2).							
Appleby, or N.	Sir Joseph Savory	1	..	..	..	..	31,176
Kendal, or S.	Captain J. F. Bagot	1	..	..	..	..	34,922
		2	..	..	..	..	66,098
WILTS (6).							
County Divisions (5).							
Chippenham, or N.W.	Sir J. D. Poynder	1	..	..	..	..	44,356
Cricklade, or N.	A. Hopkinson	..	..	1	..	..	59,414
Devizes, or E.	A. E. Golding	1	..	..	..	..	48,267
Westbury, or W.	Captain Chaloner	1	..	..	..	..	52,669
Wilton, or S.	Viscount Folkestone	1	..	..	..	..	42,901
		4	..	1	..	..	247,607
Borough (1).							
Salisbury	E. H. Hulse	1	..	..	..	..	17,362
		5	..	1	..	..	264,969
WORCESTER (8).							
County Divisions (5).							
Bewdley, or W.	A. Baldwin	1	..	..	..	..	52,018
Droitwich, or M.	R. B. Martin	..	..	1	..	..	48,281
Eastern	J. A. Chamberlain	..	..	1	..	..	59,357
Evesham, or S.	Colonel C. W. Long	1	..	..	..	..	49,538
Northern	J. W. Wilson	..	..	1	..	..	58,437
		2	..	3	..	..	267,631
Boroughs (3).							
Dudley	Brooke Robinson	1	..	..	..	..	90,223
Kidderminster	A. F. Godson, Q.C.	1	..	..	..	..	26,905
Worcester	Hon. G. H. Allsopp	1	..	..	..	..	42,899
		5	..	3	..	..	427,658

HOUSE OF COMMONS.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	
YORKSHIRE (52).							
County Divisions (*26*).							
East Riding:							
Buckrose	A. Holden	..	1	..	..	..	50,676
Holderness	Commander Bethell	1	..	..	..	..	41,479
Howdenshire	Captain W. H. Wilson-Todd.	1	..	..	..	..	49,627
North Riding:							
Cleveland	H. F. Pease	..	1	..	..	..	55,917
Richmond	J. Hutton	1	..	..	..	..	54,450
Thirsk and Malton	J. G. Lawson	1	..	..	..	..	57,191
Whitby	E. W. Beckett	1	..	..	..	..	54,781
West Riding:							
Barkeston Ash	Colonel Gunter	1	..	..	..	..	48,470
Barnsley	Earl Compton	..	1	..	..	..	78,844
Colne Valley	Sir J. Kitson	..	1	..	..	..	59,344
Doncaster	F. W. Fison	1	..	..	..	..	73,157
Elland	Alderman T. Wayman	..	1	..	..	..	64,632
Hallamshire	Sir F. Mappin	..	1	..	..	..	73,254
Holmfirth	H. J. Wilson	..	1	..	..	..	65,160
Keighley	J. Brigg	..	1	..	..	..	63,263
Morley	A. E. Hutton	..	1	..	..	..	65,219
Normanton	B. Pickard	..	1	..	..	..	72,013
Osgoldcross	Sir J. Austin	..	1	..	..	..	66,779
Otley	M. D'Arcy Wyvill	1	..	..	..	..	61,746
Pudsey	Briggs Priestley	..	1	..	..	..	49,252
Ripon	J. L. Wharton	1	..	..	..	..	54,925
Rotherham	Rt. Hon. A. H. D. Acland	..	1	..	..	..	78,578
Shipley	F. Flannery	1	..	..	..	..	62,166
Skipton	W. Morrison	..	..	1	..	..	58,213
Sowerby	Rt. Hon. J. W. Mellor, Q.C.	..	1	..	..	..	63,192
Spen Valley	T. P. Whittaker	..	1	..	..	..	57,402
		10	15	1	..	..	1,579,730
Boroughs (*26*).							
East Riding:							
Hull, Central	H. S. King	1	..	..	..	..	65,565
,, East	J. R. Firbank	1	..	..	..	..	55,492
,, West	C. H. Wilson	..	1	..	..	..	78,603
North Riding:							
Middlesbrough	J. H. Wilson	..	1	..	..	..	98,899
Scarborough	J. C. Reckitt	..	1	..	..	..	33,776
York (2)	J. G. Butcher	1	..	..	..	..	66,984
	Sir F. Lockwood, Q.C.	..	1	..	..	..	
West Riding:							
Bradford, Central	J. M. L. Wanklyn	..	..	1	..	..	65,847
,, East	Capt. The Hon. R. F. Greville	1	..	..	..	..	79,545
,, West	E. Flower	1	..	..	..	..	70,969
Dewsbury	Mark Oldroyd	..	1	..	..	..	72,983
Halifax (2)	Rawson Shaw	..	1	..	..	..	82,863
	A. Arnold	1	..	..	..	..	
Huddersfield	Sir J. T. Woodhouse	..	1	..	..	..	96,495

HOUSE OF COMMONS.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	
YORKSHIRE—*con.*							
West Riding:							
Leeds, Central	G. W. Balfour	1	..	..	..	..	69,135
,, East	T. R. Leuty	..	1	..	..	..	64,609
,, North	Rt. Hon. W. L. Jackson	1	..	..	..	..	81,547
,, South	J. L. Walton, Q.C.	..	1	..	..	..	70,018
,, West	Rt. Hon. Herbert Gladstone	..	1	..	..	..	82,197
Pontefract	T. W. Nussey	..	1	..	..	..	16,407
Sheffield, Attercliffe	Batty Langley	..	1	..	..	..	72,462
,, Brightside	Rt. Hon. A. J. Mundella	..	1	..	..	..	67,083
,, Central	Colonel Howard Vincent	1	..	..	..	..	66,461
,, Ecclesall	Sir E. Ashmead-Bartlett	1	..	..	..	..	63,302
,, Hallam	C. B. Stuart-Wortley	1	..	..	..	..	54,935
Wakefield	Viscount Milton	1	..	..	..	..	37,269
		22	28	2	..	..	3,193,176
UNIVERSITIES (5).							
Cambridge (2)	Professor R. C. Jebb	1	..	..	..	..	....
	Rt. Hon. Sir J. E. Gorst	1	..	..	..	..	....
Oxford (2)	Rt. Hon. Sir J. Mowbray	1	..	..	..	..	....
	J. G. Talbot	1	..	..	..	..	....
London	Rt. Hon. Sir John Lubbock	..	..	1	..	..	....
		4	..	1	..	..	....

WALES.

Constituencies.	Members.	Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	Parliamentary Population, 1891.
ANGLESEY (1).							
County Division (1).							
Anglesey	E. J. Griffiths	..	1	..	..	..	50,079
BRECON (1).							
County Division (1).							
Brecon	C. Morley	..	1	..	..	..	54,550
CARDIGAN (1).							
County Division (1).							
Cardigan	V. Davies	..	1	..	..	..	62,596
CARMARTHEN 3).							
County Divisions (2).							
Eastern	Abel Thomas	..	1	..	..	..	49,135
Western	J. Lloyd Morgan	..	1	..	..	..	46,926
Borough (1).		..	2	..	..	..	96,061
Carmarthen Group	Sir J. J. Jenkins	..	..	1	..	..	34,513
		..	2	1	..	..	130,745

HOUSE OF COMMONS.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite	
CARNARVON (3).							
County Divisions (*2*).							
Arfon, or N.	W. Jones	..	1	..	..	..	45,822
Eifion, or S.	J. B. Roberts	..	1	..	..	..	42,826
		..	2	..	..	..	88,648
Borough (*1*).							
Carnarvon Group	D. Lloyd George	..	1	..	..	..	29,577
		..	3	..	..	..	118,225
DENBIGH (3).							
County Divisions (*2*).							
Eastern	Rt. Hon. Sir G. O. Morgan...	..	1	..	..	..	47,317
Western	J. H. Roberts	..	1	..	..	..	46,417
		..	2	..	..	..	93,734
Borough (*1*).							
Denbigh Group	W. T. Howell	1	..	..	..	..	24,216
		1	2	..	..	..	117,950
FLINT (2).							
County Division (*1*).							
Flint	Samuel Smith	..	1	..	..	..	53,034
Borough (*1*).							
Flint Group	J. H. Lewis	..	1	..	..	..	23,251
		..	2	..	..	..	76,285
GLAMORGAN (10).							
County Divisions (*5*).							
Eastern	Alfred Thomas	..	1	..	..	..	72,465
Gower, or W.	D. D. Randall	..	1	..	..	..	55,261
Mid	S. T. Evans	..	1	..	..	..	60,968
Rhondda	W. Abraham	..	1	..	..	..	68,720
Southern	Major Quinn	..	..	1	..	..	75,337
		..	4	1	..	..	332,751
Boroughs (*5*).							
Cardiff Group	J. M. Maclean	1	..	..	..	..	132,163
Merthyr Tydvil	D. A. Thomas	..	1	..	..	..	104,008
	W. Pritchard Morgan	..	1	..	..	..	
Swansea District	D. Brynmor Jones	..	1	..	..	..	63,140
,, Town	Sir J. T. D. Llewellyn	1	..	..	..	..	57,566
		2	7	1	..	..	689,628
MERIONETH (1).							
County Division (*1*).							
Merioneth	T. E. Ellis	..	1	..	..	..	49,204

HOUSE OF COMMONS.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservative	Liberal.	Liberal U.	Nationalist.	Parnellite.	
MONTGOMERY (2).							
County Division (1).							
Montgomery	A. C. Humphreys Owen....	..	1	..	..	..	40,214
Borough (1).							
Montgomery Group ..	E. P. Jones	1	..	..	..	..	17,789
		1	1	..	..	..	58,003
PEMBROKE (2).							
County Division (1).							
Pembroke............	W. R. Davies	..	1	..	..	..	53,921
Borough (1).							
Pembroke Group	General Laurie...........	1	..	..	..	..	35,204
		1	1	..	..	..	89,125
RADNOR (1).							
County Division (1).							
Radnor..............	P. C. Milbank	1	..	..	..	..	21,791
	SCOTLAND.						
ABERDEEN (4).							
County Divisions (2).							
Eastern	T. R. Buchanan	..	1	..	..	..	79,926
Western	Dr. R. Farquharson	..	1	..	..	..	65,210
Boroughs (2).		..	2	..	..	..	145,136
Aberdeen, North......	Captain D. V. Pirie........	..	1	..	..	..	59,992
,, South......	Professor J. Bryce	..	1	..	..	..	61,631
		..	4	..	..	..	266,759
ARGYLL (1).							
County Division (1).							
Argyll	D. Nicol..................	..	..	1	..	..	61,183
AYR (4).							
County Divisions (2).							
Northern	Hon. T. H. Cochrane	..	..	1	..	..	75,801
Southern	Sir W. Arrol..............	..	..	1	..	..	88,785
Boroughs (2).		..	..	2	..	..	164,586
Ayr Group	C. L. Orr-Ewing	1	..	..	..	..	46,200
Kilmarnock Group....	Colonel Denny............	..	..	1	..	..	79,828
		1	..	3	..	..	290,614

HOUSE OF COMMONS.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	
BANFF (1).							
County Division (1).							
Banff	Sir W. Wedderburn	..	1	..	..	..	52,663
BERWICK (1).							
County Division (1).							
Berwick	H. J. Tennant	..	1	..	..	..	32,368
BUTE (1).							
County Division (1).							
Bute	A. G. Murray	1	..	..	..	..	18,217
CAITHNESS (2).							
County Division (1).							
Caithness	Dr. G. B. Clark	..	1	..	..	..	28,587
Borough (1).							
Wick Group	T. C. Hedderwick	..	1	..	..	..	18,103
		..	2	..	..	..	46,690
CLACKMANNAN AND KINROSS (1).							
County Division (1).							
Clackmannan & Kinross	Rt. Hon. J. B. Balfour	..	1	..	..	..	44,309
DUMBARTON (1).							
County Division (1).							
Dumbarton	A. Wylie	1	..	..	..	..	77,446
DUMFRIES (2).							
County Division (1).							
Dumfries	R. Souttar	..	1	..	..	..	55,290
Borough (1).							
Dumfries Group	Sir R. T. Reid, Q.C.	..	1	..	..	..	26,183
		..	2	..	..	..	81,473
EDINBURGH (6).							
County Division (1).							
Midlothian	Sir T. D. G. Carmichael	..	1	..	..	..	86,839
Boroughs (5).							
Edinburgh, Central	W. Mc.Ewan	..	1	..	..	..	63,392
,, East	Robert Wallace	..	1	..	..	..	61,931
,, South	R. Cox	1	..	..	..	..	82,337
,, West	L. Mc.Iver	..	..	1	..	..	53,565
Leith Group	R. C. Munro Ferguson	..	1	..	..	..	84,770
		1	4	1	..	..	432,834

HOUSE OF COMMONS.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservative	Liberal.	Liberal U.	Nationalist.	Parnellite.	
ELGIN & NAIRN (2).							
County Division (1).							
Elgin and Nairn......	J. E. Gordon..............	1	..	..	..	..	37,613
Borough (1).							
Elgin Group	A. Asher, Q.C.	..	1	..	..	..	33,292
		1	1	..	..	..	70,905
FIFE (4).							
County Divisions (2).							
Eastern	Rt. Hon. H. H. Asquith, Q.C.	..	1	..	..	..	50,996
Western	A. Birrell	..	1	..	..	..	58,458
Boroughs (2).		..	2	..	..	..	109,454
Kirkcaldy Group	J. H. Dalziel..............	..	1	..	..	..	36,901
St. Andrews Group ..	H. T. Anstruther..........	..	..	1	..	..	18,941
		..	3	1	..	..	165,296
FORFAR (4).							
County Division (1).							
Forfar	*J. M. White	..	1	..	..	..	67,515
Boroughs (3).							
Dundee (2)	John Leng..................	..	1	..	..	..	153,051
	E. Robertson	..	1	..	..	..	
Montrose Group	J. Morley	..	1	..	..	..	58,055
		..	4	..	..	..	278,621
HADDINGTON (1).							
County Division (1).							
Haddington	R. B. Haldane, Q.C.	..	1	..	..	..	37,429
INVERNESS (2).							
County Division (1).							
Inverness	J. E. B. Baillie............	1	..	..	..	..	69,829
Borough (1).							
Inverness Group......	R. B. Finlay	..	..	1	..	..	28,071
		1	..	1	..	..	97,900
KINCARDINE (1).							
County Division (1).							
Kincardine	J. W. Crombie	..	1	..	..	..	34,438
KIRKCUDBRIGHT (1)							
County Division (1).							
Kirkcudbright........	Sir M. Stewart	1	..	..	..	..	32,670

* Resigned; appointed Steward and Bailiff of the Chiltern Hundreds.

HOUSE OF COMMONS.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	
LANARK (13).							
County Divisions (6).							
Govan	John Wilson	..	1	..	..	..	78,512
Mid	J. Caldwell	..	1	..	..	..	71,258
North-Eastern	Provost Colville	..	1	..	..	..	85,035
North-Western	J. G. Holburn	..	1	..	..	..	75,019
Partick	J. Parker Smith	..	..	1	..	..	77,136
Southern	J. H. C. Hozier	1	..	..	..	..	52,032
		1	4	1	..	..	438,992
Boroughs (7).							
Glasgow, Blackfriars & Hutchesontown	A. D. Provand	..	1	..	..	..	73,784
,, Bridgeton	Rt. Hon. Sir G. Trevelyan	..	1	..	..	..	81,396
,, Camlachie	Alexander Cross	..	..	1	..	..	71,157
,, Central	J. G. A. Baird	1	..	..	..	..	75,379
,, College	Sir J. Maxwell	1	..	..	..	..	98,047
,, St. Rollox	Faithfull Begg	1	..	..	..	..	94,569
,, Tradeston	A. C. Corbett	..	..	1	..	..	70,649
		4	6	3	..	..	1,003,973
LINLITHGOW (1).							
County Division (1).							
Linlithgow	A. Ure	..	1	..	..	..	46,955
ORKNEY AND SHETLAND (1).							
County Division (1).							
Orkney and Shetland	Sir L. Lyell	..	1	..	..	..	54,807
PEEBLES AND SELKIRK (1).							
County Division (1).							
Peebles and Selkirk	W. Thorburn	..	..	1	..	..	19,074
PERTH (3).							
County Divisions (2).							
Eastern	Sir J. Kinloch	..	1	..	..	..	43,645
Western	Sir D. Currie	..	..	1	..	..	47,916
		..	1	1	..	..	91,561
Borough (1).							
Perth	R. Wallace	..	1	..	..	..	29,899
		..	2	1	..	..	121,460

HOUSE OF COMMONS.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	
RENFREW (4).							
County Divisions (2).							
Eastern	M. H. Shaw-Stewart	1	..	..	..	..	66,137
Western	C. B. Renshaw	1	..	..	..	..	56,622
Boroughs (2).		2	..	..	..	..	122,759
Greenock	Sir T. Sutherland	..	..	1	..	..	63,096
Paisley	Sir W. Dunn	..	1	..	..	..	66,418
		2	1	1	..	..	252,273
ROSS & CR'M'RTY (1).							
County Division (1).							
Ross and Cromarty	J. G. Weir	..	1	..	..	..	71,432
ROXBURGH (2).							
County Division (1).							
Roxburgh	Earl of Dalkeith	1	..	..	..	..	34.537
Borough (1).							
Hawick Group	Thomas Shaw	..	1	..	..	..	42,244
		1	1	..	..	..	76,781
STIRLING (3).							
County Division (1).							
Stirling	J. Mc.Killop	1	..	..	..	..	86,293
Boroughs (2).							
Falkirk Group	J. Wilson	..	..	1	..	..	65,346
Stirling Group	H. Campbell-Bannerman	..	1	..	..	..	39,987
		1	1	1	..	..	191.626
SUTHERLAND (1).							
County Division (1).							
Sutherland	J. G. Mc.Leod	..	1	..	..	..	21,267
WIGTOWN (1).							
County Division (1).							
Wigtown	Sir H. E. Maxwell	1	..	..	..	..	35,989
UNIVERSITIES (2).							
Edinbro' & St. Andrews.	Sir Wm. Priestley	1	..	..	..	..	....
Glasgow and Aberdeen.	J. A. Campbell	1	..	..	..	..	....
		2	..	..	..	..	....

HOUSE OF COMMONS.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	
	IRELAND.						
ANTRIM (8).							
County Divisions (4).							
Eastern	Captain J. Mc.Calmont	1	..	..	..	..	52,032
Mid	The Hon. R. Torrens O'Neill	1	..	..	..	..	50,027
Northern	Colonel H. Mc.Calmont....	1	..	..	..	..	51,090
Southern	W. G. E. Macartney	1	..	..	..	..	51,887
		4	..	..	..	..	205,036
Boroughs (4).							
Belfast, East	G. W. Wolff	1	..	..	..	..	85,661
,, North	Sir J. H. Haslett	1	..	..	..	..	67,585
,, South	W. Johnston..............	1	..	..	..	..	58,508
,, West..........	H. O. Arnold Foster	..	..	1	..	..	61,360
		7	..	1	..	..	478,150
ARMAGH (3).							
County Divisions (3).							
Mid	D. Plunket Barton, Q.C. ..	1	..	..	..	..	45,264
Northern	Colonel Saunderson........	1	..	..	..	..	49,157
Southern	E. Mc.Hugh	..	..	..	1	..	43,219
		2	..	..	1	..	137,640
CARLOW (1).							
County Division (1).							
Carlow	J. Hammond	..	..	..	1	..	40,936
CAVAN (2).							
County Divisions (2).							
Eastern	S. Young	..	..	..	1	..	54,402
Western	J. P. Farrell	..	..	..	1	..	57,515
		..	..	..	2	..	111,917
CLARE (2).							
County Divisions (2).							
Eastern	W. Redmond	..	..	..	..	1	61,196
Western	Major Jameson	..	..	..	1	..	63,287
		..	..	..	1	1	124,483

HOUSE OF COMMONS.

Constituencies.	Members.	Politics. Conservtive.	Liberal.	Liberal U.	Nationalist.	Parnellite.	Parliamentary Population, 1891.
CORK (9).							
County Divisions (7).							
Eastern	Captain Donelan	..	..	..	1	..	49,700
Mid	Doctor C. Tanner	..	..	..	1	..	49,462
Northern	J. C. Flynn	..	..	..	1	..	49,248
North-Eastern	W. Abraham	..	..	..	1	..	49,873
Southern	Edward Barry	..	..	..	1	..	47,215
South-Eastern	Dr. Commins	..	..	..	1	..	47,030
Western	J. Gilhooly	..	..	..	1	..	48,623
		..	..	..	7	..	341,151
Boroughs (2).							
Cork (2)	J. F. X. O'Brien	..	..	..	1	..	97,281
	Maurice Healy	..	..	..	1	..	
		..	..	..	9	..	438,432
DONEGAL (4).							
County Divisions (4).							
Eastern	Arthur O'Connor	..	..	..	1	..	45,417
Northern	T. B. Curran	..	..	..	1	..	46,248
Southern	J. G. S. MacNeill	..	..	..	1	..	46,624
Western	T. D. Sullivan	..	..	..	1	..	47,346
		..	..	..	4	..	185,635
DOWN (5).							
County Divisions (4).							
Eastern	J. A. Rentoul	1	..	..	..	..	52,274
Northern	Colonel Waring	1	..	..	..	..	54,179
Southern	M. Mc.Cartan	..	..	..	1	..	51,652
Western	Rt. Hon. Lord Arthur Hill	1	..	..	..	..	50,890
		3	..	..	1	..	208,995
Borough (1).							
Newry	P. G. Carvill	..	..	..	1	..	13,691
		3	..	..	2	..	222,686
DUBLIN (6).							
County Divisions (2).							
Northern	J. J. Clancy	..	..	..	..	1	75,009
Southern	Hon. Horace Plunkett	1	..	..	..	..	74,491
		1	..	..	..	1	149,500
Boroughs (4).							
Dublin, College Green	Dr. J. E. Kenny	..	..	..	..	1	67,923
,, Dublin Harbour	T. Harrington	..	..	..	..	1	71,530
,, St. Patrick's	William Field	..	..	..	..	1	64,611
,, St. Stphn's Gr'n	J. L. Carew	..	..	1	..	..	65,652
		1	..	1	..	4	419,216

HOUSE OF COMMONS.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	
FERMANAGH (2).							
County Divisions (2).							
Northern	Richard M. Dane	1	..	..	..	..	37,799
Southern	J. Jordan	..	..	..	1	..	36,371
		1	..	..	1	..	74,170
GALWAY (5).							
County Divisions (4).							
Connemara	W. O'Malley	..	..	..	1	..	50,503
Eastern	J. Roche	..	..	..	1	..	49,083
Northern	D. Kilbride	..	..	..	1	..	51,924
Southern	D. Sheehy	..	..	..	1	..	46,243
Borough (1).		..	..	..	4	..	197,753
Galway	J. Pinkerton	..	..	..	1	..	16,959
		..	..	..	5	..	214,712
KERRY (4).							
County Divisions (4).							
Eastern	Hon. J. B. Roche	..	..	..	1	..	44,437
Northern	W. Flavin	..	..	..	1	..	43,417
Southern	T. G. Farrell	..	..	..	1	..	45,588
Western	Sir T. H. G. Esmonde	..	..	..	1	..	45,694
		..	..	..	4	..	179,136
KILDARE (2).							
County Divisions (2).							
Northern	C. J. Engledew	..	..	..	1	..	32,925
Southern	M. J. Minch	..	..	..	1	..	37,281
		..	..	..	2	..	70,206
KILKENNY (3).							
County Divisions (2).							
Northern	P. Mc.Dermott	..	..	..	1	..	35,645
Southern	Samuel Morris	..	..	..	1	..	37,894
Borough (1).		..	..	..	2	..	73,539
Kilkenny	P. O'Brien	..	..	..	..	1	13,722
		..	..	..	2	1	87,261
KING'S COUNTY (2).							
County Divisions (2).							
Birr	B. C. Molloy	..	..	..	1	..	33,992
Tullamore	Dr. J. F. Fox	..	..	..	1	..	31,571
		..	..	..	2	..	65,563

HOUSE OF COMMONS.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	
LEITRIM (2).							
County Divisions (2).							
North	P. A. Mc.Hugh	..	..	..	1	..	39,235
South	J. Tully	..	..	..	1	..	39,383
		..	..	..	2	..	78,618
LIMERICK (3).							
County Divisions (2).							
Eastern	J. Finucane	..	..	..	1	..	55,912
Western	M. Austin	..	..	..	1	..	56,865
		..	..	..	2	..	112,777
Borough (*1*).							
Limerick	F. A. O'Keefe	..	..	..	1	..	46,135
		..	..	..	3	..	158,912
LONDONDERRY (3).							
County Divisions (2).							
Northern	J. Atkinson	1	..	..	..	..	59,824
Southern	Sir T. Lea	..	..	1	..	..	58,985
		1	..	1	..	..	118,809
Borough (*1*).							
Londonderry	E. F. V. Knox	..	..	..	1	..	33,200
		1	..	1	1	..	152,009
LONGFORD (2).							
County Divisions (2).							
Northern	Justin Mc.Carthy	..	..	..	1	..	26,735
Southern	Hon. E. Blake	..	..	..	1	..	25,912
		..	..	..	2	..	52,647
LOUTH (2).							
County Divisions (2).							
Northern	Timothy M. Healy	..	..	..	1	..	37,571
Southern	R. M. Ghee	..	..	..	1	..	33,467
		..	..	..	2	..	71,038
MAYO (4).							
County Divisions (4).							
Eastern	John Dillon	..	..	..	1	..	52,454
Northern	D. Crilly	..	..	..	1	..	53,662
Southern	M. Davitt	..	..	..	1	..	55,987
Western	Dr. Robert Ambrose	..	..	..	1	..	56,931
		..	..	..	4	..	219,034

HOUSE OF COMMONS.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	
MEATH (2).							
County Divisions (*2*).							
Northern	J. Gibney	..	..	..	1	..	38,854
Southern	J. H. Parnell	..	..	..	..	1	38,133
		..	..	..	1	1	76,987
MONAGHAN (2).							
County Divisions (*2*).							
Northern	D. MacAleese	..	..	..	1	..	43,536
Southern	James Daly	..	..	..	1	..	42,670
		..	..	..	2	..	86,206
QUEEN'S COUNTY (2)							
County Divisions (*2*).							
Leix	M. A. MacDonnell	..	..	..	1	..	32,060
Ossory	E. Crean	..	..	..	1	..	32,823
		..	..	..	2	..	64,883
ROSCOMMON (2).							
County Divisions (*2*).							
Northern	J. J. O'Kelly	..	..	..	..	1	56,706
Southern	L. P. Hayden	..	..	..	..	1	57,691
		..	..	..	..	2	114,397
SLIGO (2).							
County Divisions (*2*).							
Northern	B. Collery	..	..	..	1	..	48,686
Southern	Thomas Curran	..	..	..	1	..	49,327
		..	..	..	2	..	98,013
TIPPERARY (4).							
County Divisions (*4*).		..	..	..	1	..	44,738
Eastern	T. J. Condon	..	..	..	1	..	43,900
Mid	J. F. Hogan	..	..	..	1	..	43,425
Northern	P. J. O'Brien	..	..	..	1	..	41,125
Southern	F. Mandeville						
		..	..	..	4	..	173,188
TYRONE (4).							
County Divisions (*4*).							
Eastern	B. C. Duggan	..	..	..	1	..	44,760
Mid	G. Murnaghan	..	..	..	1	..	43,404
Northern	Serjeant Hemphill	..	1	..	..	..	42,403
Southern	T. W. Russell	..	..	1	..	..	40,834
		..	1	1	2	..	171,401

HOUSE OF COMMONS.

Constituencies.	Members.	Politics.					Parliamentary Population, 1891.
		Conservtive	Liberal.	Liberal U.	Nationalist.	Parnellite.	
WATERFORD (3).							
County Divisions (2).							
Eastern	P. J. Power	..	..	..	1	..	33.347
Western	J. J. Shee	..	..	..	1	..	37,191
Borough (1).		..	..	..	2	..	70,538
Waterford	J. E. Redmond	..	..	..	..	1	27,713
		..	..	..	2	1	98,251
WESTMEATH (2).							
County Divisions (2).							
Northern	J. Tuite	..	..	..	1	..	33,735
Southern	D. Sullivan	..	..	..	1	..	31,374
		..	..	..	2	..	65,109
WEXFORD (2).							
County Divisions (2).							
Northern	Thomas J. Healy	..	..	..	1	..	55,357
Southern	Peter Ffrench	..	..	..	1	..	56,421
		..	..	..	2	..	111,778
WICKLOW (2)							
County Divisions (2).							
Eastern	W. J. Corbet	..	..	..	..	1	31,382
Western	James O'Connor	..	..	..	1	..	30,754
		..	..	..	1	1	62,136
UNIVERSITIES.							
Dublin University (2)	W. E. Lecky	1	..	..	..	..	....
	E. Carson, Q. C.	1	..	..	..	..	....
		2	..	..	..	..	....

STATE OF PARTIES.

	England.	Scotland.	Wales.	Ireland.	Total.
Liberals	117	40	22	1	180
Conservatives	296	18	6	17	337
Liberal Unionists	51	14	2	4	71
Nationalists	1	..	..	70	71
Parnellites	..	..	..	11	11
	465	72	30	103	670

SUMMARY.

	Counties.							Boroughs.							Universities.			Totals.						
	Members.							Members.							Members.			Members.						
	Conservative.	Liberal.	Liberal U.	Nationalist.	Parnellite.	Total.	Population.	Conservative.	Liberal.	Liberal U.	Nationalist.	Parnellite.	Total.	Population.	Conservative.	Liberal U.	Total.	Conservative.	Liberal.	Liberal U.	Nationalist.	Parnellite.	Total.	Population.
England	142	66	26	..	..	234	13,838,248	150	51	24	1	..	226	13,626,602	4	1	5	292	117	50	1	..	465	27,464,850
Wales	1	17	1	..	..	19	996,583	5	5	1	..	..	11	521,427	..	..	..	6	22	2	..	..	30	1,518,010
Scotland	11	22	6	..	..	39	2,179,238	5	18	8	..	..	31	1,838,214	2	..	2	16	40	14	..	..	72	4,017,452
Ireland	12	1	2	64	6	85	3,913,219	3	..	2	6	5	16	791,531	2	..	2	15	1	4	70	11	103	4,704,750
Totals..........	166	106	35	64	6	377	20,927,288	163	74	35	7	5	284	16,777,774	8	1	9	329	180	70	71	11	670	37,705,062

HOUSE OF COMMONS.

PROFESSIONS OF MEMBERS.

An analysis of the various professions and mercantile positions of the members of the present House of Commons. It will be observed that the total number here represented exceeds those elected; this is brought about by duplicate qualifications.

Bankers and financiers	26
Barristers (in or out of practice) and Q.C.s	131
Brewers and distillers and wine merchants	19
Builder and architect	1
Civil and mining engineers	12
Colliery proprietors and coal merchants	15
Diplomatists and Government officials	9
Estate agents and accountants	4
Farmers and agriculturists	15
Gentry and landowners	105
Hotel proprietors	2
Ironmasters and metal merchants	15
Labour representatives	12
Manufacturers and spinners	54
Medical profession	11
Merchants	35
Military and naval officers (forty-six active service)	119
Newspaper proprietors and journalists	31
Peers' sons and brothers	41
Printers and booksellers	7
Professors of Universities and lecturers	10
Railway contractors	2
Shipowners and builders	18
Solicitors (in or out of practice)	19
Stock and share brokers	4
Shopkeepers and traders	16
Schoolmasters	3
Professions not stated	5

THE GENERAL

Return *of* Charges *made to* Candidates *at the* General *(both exclusive and inclusive of Returning Officers' Charges)*

GRAND

—	Number of Polling Districts and Stations.		Number of Polling Booths held in School-rooms.	Returning Officers' Charges.					
	Districts. 1.	Stations. 2.	3.	Cost of Polling Booths. 4.			Cost of Dies, Ballot Papers, Boxes, Advertising, Placards, Stationery, &c. 5.		
				£	s.	d.	£	s.	d.
England & Wales..	7,042	8,823	6,929	21,893	0	5	13,696	15	5
Scotland ..	777	1,391	1,060	1,906	19	8	1,739	1	9
Ireland	514	1,051	271	1,920	2	4½	1,774	8	7
Total	8,333	11,265	8,260	25,720	2	5½	17,210	5	9

—	Total Expenses of Candidates, exclusive of Returning Officers' Charges.														
	Agents. 11.			Clerks and Messengers. 12.			Printing, Advertising, Stationery, Postage, and Telegrams. 13.			Public Meetings. 14.			Committee Rooms. 15.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
England & Wales	117,406	18	10½	68,623	13	5	222,779	5	5½	11,042	15	4	21,397	2	3
Scotland	29,191	2	10	12,161	9	1½	30,873	2	4	2,495	7	4	2,223	14	7½
Ireland..	4,505	11	11	1,641	14	11	5,522	5	2	121	1	7	341	18	6
Total..	151,103	13	7½	82,426	17	5½	259,174	12	11½	13,659	4	3	23,962	15	4½

Number of Electors on Register:

England and Wales	4,959,806
Scotland	634,162
Ireland	736,552
Total..........	6,330,520

Maximum Scale allowed by Corrupt Practices Act, 1883:

England and Wales......	£797,492
Scotland................	127,570
Ireland	100,145
Total..........	£1,025,207

* Note.—The Averages in Column 21 have been calculated from the Totals of

ELECTION, 1895.

ELECTION, *in 1895, specifying the* TOTAL EXPENSES *of* CANDIDATES *in* ENGLAND *and* WALES, SCOTLAND, *and* IRELAND.

SUMMARY.

Returning Officers' Charges.												Total Returning Officers' Charges as Paid, whether reduced by Taxation or otherwise.		
Cost of Presiding Officers, Clerks, Counting Clerks, &c. 6.			Fee charged by Returning Officer or his Official. 7.			All other Charges of the Returning Officer. 8.			Total. 9.			10.		
£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
48,520	17	7	17,158	15	3	6,393	13	9	126,099	19	3	124,927	11	9
8,840	14	8	2,030	8	9	999	19	1	17,946	4	1	17,946	4	1
2,694	4	6	1,416	0	0	524	11	2	11,643	14	6½	13,867	15	6½
60,055	16	9	20,605	4	0	7,918	4	0	155,689	17	10½	156,741	11	4½

Total Expenses of Candidates, exclusive of Returning Officers' Charges.									Total Expense of Candidates, inclusive of Returning Officers' Charges Paid.			Number of Votes Polled by Candidates.	Average Cost per Vote Polled.	
Miscellaneous Matters. 16.			Personal Expenses. 17.			Total Expenses. 18.			19.			20.	21.	
£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.		s.	d.
39,517	0	0	33,149	13	10	514,025	2	3	638,952	14	0	3,190,826	*3	10
6,226	19	11	4,957	14	4½	88,129	10	6½	106,075	14	7½	455,729	*4	7¾
1,376	12	10	1,821	11	2½	15,841	14	10½	28,304	11	7½	220,505	*3	1½
47,120	12	9	39,928	19	5	617,996	7	8	773,333	0	3	3,867,060	*3	8¾

Members:		Candidates:	
England and Wales	495	England and Wales	888
Scotland	72	Scotland	144
Ireland	103	Ireland	149
Grand Total	670	Grand Total	1,181

Columns 19 and 20, exclusive of expenses incurred in uncontested constituencies.

FOREIGN MONEYS AND THEIR ENGLISH EQUIVALENTS.

COUNTRY.	GOLD COINS. Denominations.	STERLING VALUE. £ s. d.	SILVER COINS. Denominations.	60⅞d., *i.e.*, Gold to Silver as 15·5 is to 1. s. d. Intrinsic Value with Silver per Troy Ounce.
*America	See United States.			
Argentine Republic	Argentino or 5-peso piece	0 19 10	Peso of 100 centesimos	3 11½
*Austria-Hungary	Ducat	0 9 4	*Florin* or *gulden* of 100 kreutzer	1 11¾
	8-florin or gulden piece	0 15 10¼	¼-florin	0 5¾
Belgium	See France, and footnote.			
Brazil	10 milreis	1 2 5½	1 milreis of 1,000 reis	2 0¾
*Chili, Columbia, Uruguay	Doubloon or 5-peso piece	0 18 9	1 peso of 100 centavos	3 11½
China	....	....	Tael of 10 mace or 100 conderin or 1,000 cash	6 6¼
Denmark	10-crown piece	0 11 0¼	1 *crown* of 100 ore	1 0¾
Egypt	100-piastre piece (Egyptian £)	1 0 3½	1 piastre	0 2½
Finland	10-markkaa piece	0 7 11¼	1 markka of 100 penni	0 9½
*France	10-franc piece	0 7 11¼	5-franc piece	3 11½
			1 *franc* of 100 centimes	0 8¾
*German Empire	Crown of 10 reichsmarks	0 9 9½	1 *reichsmark* or mark of 100 pfennige	0 10½
*Great Britain	Sovereign of 20 shillings	1 0 0	Crown of 5 shillings	4 7¼
			Shilling of 12 pence	0 11
*Greece	See France, and footnote.			
*Holland and Java	Ducat	0 9 4½	Rixdaler of 2½ florins	4 2
	10-florin piece	0 16 6¼	*Florin* of 100 cents	1 8
India	Mohur of 15 rupees	1 9 2½	Rupee of 16 annas, 64 pice, or 192 pies	1 10½
Italy	See France, and footnote.			
Japan	10-yen piece	2 0 11¾	1 yen of 100 sen	4 3¼
Mexico	10-peso piece	2 0 5¼	1 peso of 100 centavos	4 3¾
*Netherlands	See Holland.			
*Norway and Sweden	See Denmark, and footnote.			
Ottoman Empire	Turkish pound of 100 piastres	0 18 0¾	1 piastre of 40 paras	0 2
Persia	Toman of 200 shahis	0 9 5	Khran of 20 shahis	0 8½

Peru	10-sol piece	1 19 7¾	Sol of 10 dineros or 100 cents	3 11½	Intrinsic Value with Silver per Troy Ounce.
*Portugal	Crown of 10 milreis	2 4 4¾	*Teston* of 100 reis	0 4¾	
*Roumania	See France, and footnote.				
Russia	Imperial of 10 roubles	1 11 9	Rouble of 100 kopecks	3 2	
			Tchetvertak or ¼ *rouble*	0 9½	
Servia and Bulgaria	See France, and footnote.				
*Spain	Doubloon of 10 escudos	1 0 7¼	Escudo (or ½-dollar) of 10 reals	2 0¾	
	25-peseta piece	0 19 10	Peseta of 100 centimos	0 8¾	
*Switzerland	See France, and footnote.				
Tunis	10-piastre piece	0 4 9½	Piastre	0 6	
Turkey	See Ottoman Empire.				
*United States	Eagle of 10 dollars	2 1 1¼	Trade dollar	4 3¾	
			Dollar of 100 cents	4 2¾	
			½-dollar of 50 cents	1 11¾	
Uruguay	See Chili, and footnote.				
Venezuela	See Peru, and footnote.				

EXPLANATORY NOTES.

France, Belgium, Italy, Greece, and Switzerland constitute what is known as the "Latin" Union, and their coins are alike in weight and fineness, differing occasionally in name. The same system has been in part adopted by Spain, Servia, Bulgaria, Russia, and Roumania, but they have not joined the Union. Francs and centimes of France, Belgium, and Switzerland are designated lire and centesimi in Italy; drachmai and lepta in Greece; dinars and paras in Servia; pesetas and centimos in Spain; leys and banis in Roumania; leva and stotinkis in Bulgaria. Norway, Sweden, and Denmark employ coins of the same weight and fineness, their names being also alike. Most of the South American States possess a standard coin, equal in weight and fineness to the silver 5-fr. piece, generally termed a "peso." In Hayti the corresponding coin is a "gourde."

Every denomination of English money is current in all British colonies. The exchange value of the moneys of those countries indicated by a * is determined by the rate of exchange for the day, and may be taken as approximately that given in the last column. The rate given in the daily papers generally represents the number of the standard coins (those printed in italics) that are equivalent to one sovereign. The Spanish rate is given in terms of the old dollar (= 2 escudos). The value of other silver coins is approximately determined by the market value of silver, and may be found in the column headed "Intrinsic Value with Silver at per Troy Ounce." The exchange value of the rupee depends on the rate for "India Council Bills." In "bimetallic" countries pure gold is generally taken as being worth 15½ times its weight of pure silver. This proportion corresponds to giving standard silver a constant value of 60⅞d. See last column of table.

THE INDIAN

AREA AND POPULATION OF BRITISH TERRITORY, REVENUE

NOTE.—The figures are approximate, and in all the columns except the first

(From Official sources.) *For explanation*

YEARS.	Area in Square Miles. *a*	Population. *b*	REVENUE.					
			Land Revenue. *c*	Opium.	Taxes. *d*	Public Works. *e*	Other Receipts. *f*	TOTAL.
1846–7....	694,000		14·53	3·68	5·75	—	1·30	25·26
1847–8....	699,000		15·00	2·73	5·75	—	1·19	24·67
1848–9....	771,000		14·83	3·91	5·31	—	1·18	25·23
1849–50 ..	772,000		15·79	4·50	5·85	—	1·27	27·41
1850–1....	776,000	154·79	16·27	3·79	5·72	—	1·77	27·55
1851–2....			16·24	4·26	5·77	—	1·56	27·83
1852–3....	802,000		16·19	5·09	5·82	—	1·51	28·61
1853–4....	828,000		16·07	4·78	5·75	—	1·53	28·13
1854–5....	832,000		16·51	4·71	6·42	—	1·49	29·13
1855–6....			17·11	5·20	6·81	—	1·70	30·82
1856–7*k* ..			17·91	5·01	6·86	·92	2·68	33·38
1857–8....			15·32	6·86	6·19	·48	2·86	31·71
1858–9....			18·12	6·15	7·79	·65	3·35	36·06
1859–60 ..	856,000		18·76	5·89	9·62	·72	4·72	39·71
1860–1....		179·13	18·51	6·68	12·66	·85	4·20	42·90
1861–2....			19·69	6·36	13·43	·59	3·76	43·83
1862–3....			19·57	8·06	13·55	·44	3·52	45·14
1863–4....			20·61*c*	6·83	12·70	·46	4·01	44·61
1864–5....			20·44	7·36	13·30	·59	3·96	45·65
1865–6....			20·84	8·52	12·56	·92	6·10	48·94
1866–7*l* ..			19·45	6·80	11·32	·54	4·01	42·12
1867–8....			20·32	8·92	13·38	·56	5·35	48·53
1868–9....			20·34	8·45	13·38	·55	6·54	49·26
1869–70 ..			21·56	7·95	14·06	·96	6·37	50·90
1870–1....		190·56	21·08	8·04	15·67	·92	5·70	51·41
1871–2....	860,000		21·02	9·26	14·21	·83	4·79	50·11
1872–3....			21·37	8·69	16·25	3·90	6·34	56·55
1873–4....			21·06	8·32	15·65	4·76	6·62	56·41
1874–5....			21·33	8·56	15·91	5·32	6·89	58·01
1875–6....			21·54	8·47	16·26	5·64	7·05	58·96

CENSUS, 1891–2.

AND EXPENDITURE, AND SURPLUS OR DEFICIT, FOR 46 YEARS.

are given in millions and decimals of millions. The values are in Tens of Rupees.

of references see foot of pages 604 and 605.

Expenditure.									
Charges of Collection, &c.	Civil Administration. *g*	Interest.	Army.	Public Works. *h*	Famine.	Miscellaneous. *i*	Total.	Surplus.	Deficit.
5·65	5·45	2·75	11·98	·26	—	·00	26·09	—	·83
6·20	5·87	2·89	11·19	·36	—	—	26·51	—	1·84
6·06	5·72	3·04	11·27	·40	—	·11	26·60	—	1·37
6·06	6·00	3·04	11·39	·35	—	·01	26·85	·56	—
6·22	6·18	3·24	10·83	·46	—	·00	26·93	·62	—
6·36	6·19	3·13	10·81	·61	—	—	27·10	·73	—
6·56	6·48	3·30	11·09	·55	—	—	27·98	·63	—
6·72	6·90	3·47	12·10	·90	—	—	30·09	—	1·96
7·39	7·08	2·92	11·62	1·94	—	—	30·95	—	1·82
7·20	7·21	3·07	11·95	2·43	—	—	31·86	—	1·04
6·87	·88	2·94	12·78	4·34	—	1·04	33·85	—	·47
6·38	8·76	2·98	18·40	3·05	—	—	39·57	—	7·86
6·50	9·91	3·78	25·16	4·29	—	—	49·64	—	13·58
6·68	10·09	4·61	23·50	5·17	—	·43	50·48	—	10·77
7·63	9·89	4·99	18·57	5·37	—	·47	46·92	—	4·02
8·11	7·10	5·19	16·19	6·17	—	1·12	43·88	—	·05
8·49	7·39	5·47	14·89	5·97	—	1·11	43·32	1·82	—
8·97	7·72	5·10	14·55	7·05	—	1·14	44·53	·08	—
8·98	7·81	5·11	15·77	6·72	—	1·45	45·84	—	·19
8·45	8·67	5·21	16·76	5·13	—	1·95	46·17	2·77	—
7·64	8·35	4·89	15·82	6·13	—	1·81	44·64	—	2·52
8·95	9·22	5·74	16·10	7·42	—	2·11	49·54	—	1·01
9·25	9·99	5·65	16·27	8·28	—	2·59	52·03	—	2·77
9·23	10·31	5·61	16·33	6·89	—	2 41	50·78	·12	—
9·27	9·86	5·84	16·07	6·05	—	2·84	49·93	1·48	—
8·52	10·12	5·97	15·68	4·31	—	2·39	46·99	3·12	—
7·34	9·57	5·86	15·50	10·33	—	6·18	54·78	1·77	—
7·50	9·78	5·38	15·23	11·25	3·86	5·22	58·22	—	1·81
7·81	10·05	4·84	15·38	11·53	2·24	5·84	57·69	·32	—
7·87	10·32	4·83	15·70	12·57	·60	5·48	57·37	1·59	—

THE INDIAN

AREA AND POPULATION OF BRITISH TERRITORY, REVENUE

NOTE.—The figures are approximate, and in all the columns except the first

Years.	Area in Square Miles. *a*	Population. *b*	Revenue.					
			Land Revenue. *c*	Opium.	Taxes. *d*	Public Works. *e*	Other Receipts. *f*	Totals.
1876–7 ...			19·89	9·12	16·09	6·61	6·94	58·65
1877–8 ...			20·04	9·18	16·89	8·66	7·20	61·97
1878–9 ...			22·32	9·40	18·54	7·66	7·27	65·19
1879–80..			21·86	0·32	19·15	9·37	7·73	68·43
1880–1 ...		198·79	21·11	10·48	19·38	11·60	11·72	74·29
1881–2 ...			21·94	19·36	19·98	12·95	11·45	75·68
1882–3 ...	868,256		21·87	9·50	17·66	13·05	8·19	70·27
1883–4 ...			22·36	9.56	17·73	14·12	8·07	71·84
1884–5 ...			21·83	8·82	18·45	14·19	7·40	70·69
1885–6 ...			22·59	8·94	18·72	15·88	8·33	74·46
1886–7 ...	947,887		23·06	8·94	20·38	16·86	8·10	77·34
1887–8 ...			23·19	8·51	20·90	16·84	9·32	78·76
1888–9 ...			23·02	8·56	22.22	18·02	9·88	81·70
1889–90..			23·91	8·58	23·68	18·24	10·67	85·08
1890–1 ...			24·04	7·88	24·39	20·05	9·38	85·74
1891–2 ...		221,173	23·96	8·01	24·87	22·84	9·36	89·14
Total for 46 years			914·37	336·99	632·73	257·54	254·33	2,398·06

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a Excluding Berar and Mysore.

b The first Census of all British India was taken in 1871. For the population figures of 1861 and 1851 an approximate figure, on the basis of the 1871 census, has been entered, to attain which deduction has been made for the population of recently acquired territory and for an annual increment to the population.

c Including for the years previous to 1864–5, the receipts from recently acquired territory not separately classified; after 1862–3 Forest Receipts are also included. From 1877–8 the portion of Land Revenue due to Irrigation is excluded from this head and shown under Public Works.

d Excise, Assessed, Provincial Rates Customs, Salt, and Stamps. Local Funds were incorporated in the General Accounts in 1878–9 and caused and addition of over £2,000,000 to this head, the amount being balanced by sums entered under various heads on the expenditure side

e Including from 1876–7 Guaranteed Railway Traffic Receipts, and from 1877–8 the portion of Land Revenue due to Irrigation.

AND EXPENDITURE, AND SURPLUS OR DEFICIT, FOR 46 YEARS.—*con.*

are given in millions and decimals of millions. The values are in Tens of Rupees.

Expenditure.									
Charges of Collections, &c.	Civil Administration. *g*	Interest.	Army.	Public Works. *h*	Famine.	Miscellaneous. *i*	TOTALS.	Surplus.	Deficit.
8·40	10·61	5·05	16·46	12·86	2·14	5·72	61·24	—	2·59
8·32	10·46	5·15	17·30	13·50	5·34	6·17	66·24	—	4·27
7·47	10·46	5·40	17·94	14·67	·31	6·81	63·06	2·13	—
7·86	10·46	5·39	22·58	16·52	·10	6·75	69·66	—	1·23
8·05	10·67	4·63	28·93	19·19	·03	6·42	77·92	—	3·63
8·22	11·13	4·85	19·69	18·78	1·57	7·84	72·08	3·60	—
8·49	11·04	4·77	18·36	20·31	1·50	5·13	69·60	·67	—
8·49	11·36	4·52	18·12	20·06	1·52	5·89	69·96	1·88	—
9·56	11·74	4·62	16·96	20·47	1·55	6·18	71·08	—	0·39
9·80	12·24	4·33	20·10	21·84	1·50	7·46	77·27		2·81
9·75	12·70	4·31	19·52	23·36	·31	7·21	77·16	·18	—
9·44	12·91	5·44	20·42	24·65	·09	7·84	60·79	—	2·03
9·74	13·01	4·71	20·30	25·71	·08	8·11	81·66	·04	—
8·91	13·23	4·24	20·68	26·53	·60	8·28	82·47	2·61	—
9·53	13·38	4·19	20·69	26·39	·60	7·47	82·25	3·49	—
9·55	13·85	4·31	22·28	30·13	1·27	7·28	88·67	·47	—
336·44	433·12	206·75	769·21	481·25	25·21	156·26	2,438·24	30·8	70·86
								Net deficit 40·18	

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f Forest, Registration, Tributes, Interest, Post Office, Telegraph, Mint Receipts by Civil and Military Departments, and Miscellaneous.

g Including Minor Departments, Law and Justice, Police, Marine, Education, &c. From 1870–1 to 1875–6 Allotments to Provincial Services are included.

h Previous to 1876–7 the figures include Guaranteed Railway Interest less Traffic Receipts; from 1876–7 the gross payments for Guaranteed Railway Interest is included.

i Including Post Office, Telegraph, Mint, Miscellaneous Civil Charges, Special Defence Works, and Provincial Adjustments.

k A change in the mode of preparing the accounts having been effected in 1856–7, the figures are given in the corrected form.

l The period of the financial year having been altered, the figures for 1886–7 are for eleven months only.

PRESIDENTS OF THE UNITED STATES OF AMERICA.

	YEAR.
Declaration of Independence	4th July, 1776
General Washington, first President	1789 and 1793
John Adams	1797
Thomas Jefferson	1801 and 1805
James Madison	1809 and 1813
James Monroe	1817 and 1821
John Quincy Adams	1825
General Andrew Jackson	1829 and 1833
Martin Van Buren	1837
General William Henry Harrison (died 4th April)	1841
John Tyler (previously Vice-President)	1841
James Knox Polk	1845
General Zachary Taylor (died 9th July, 1850)	1849
Millard Fillmore (previously Vice-President)	1850
General Franklin Pierce	1853
James Buchanan	1857
Abraham Lincoln (assassinated 14th April, 1865)	1861 and 1865
Andrew Johnson (previously Vice-President)	1865
General Ulysses S. Grant	1869 and 1873
Rutherford Richard Hayes, after long contest with Tilden	1877
General Garfield (shot July 2; died September 19)	1881
Chester A. Arthur, Vice-President, succeeded September 20)	1881
Grover Cleveland	1885
General Benjamin Harrison	1889
Grover Cleveland	1893
William M'Kinley	1896

The United States of America form a Federal Republic, consisting of 45 States and 5 Territories.

The estimated population of the whole of the Territories, including the States, according to the Census of 1896, was 71,384,042, every country under heaven being represented. The increase in the ten years 1880-1890 was 12,466,467.

STAMPS, TAXES, AND EXCISE DUTIES, &c.

	£	s.	d.
Affidavit or Statutory Declaration	0	2	6
Agreement, or any Memorandum of an Agreement, made under hand only, not otherwise charged	0	0	6
Appraisement or Valuation of any property where the amount of the appraisement or valuation does not exceed £5	0	0	3

	and does not	£	s.	d.		and does not	£	s.	d.
Exceeds £5	exceed £10	0	0	6	Exceeds £40	exceed £50	0	2	6
,, 10	,, 20	0	1	0	,, 50	,, 100	0	5	0
,, 20	,, 30	0	1	6	,, 100	,, 200	0	10	0
,, 30	,, 40	0	2	0	,, 200	,, 500	0	15	0

	£	s.	d.
Exceeding £500	1	0	0
Apprenticeship Indentures	0	2	6
Armorial Bearings.—If used on any carriage	2	2	0
If used for any other purpose	1	1	0

Bank Note—For money payable on demand—

	and not	£	s.	d.		and not	£	s.	d.
Not exceeding £1		0	0	5	Exceeding £10	exceeding £20	0	2	0
Exceeding £1	exceeding £2	0	0	10	,, 20	,, 30	0	3	0
,, 2	,, 5	0	1	3	,, 30	,, 50	0	5	0
,, 5	,, 10	0	1	9	,, 50	,, 100	0	8	6

	£	s.	d.
Bill of Exchange, payable on demand	0	0	1
Bill of Exchange and Promissory Note, of any kind except a bank note—drawn or payable or negotiated in the United Kingdom, where value does not exceed £5	0	0	1
Exceeds £5 and does not exceed 10	0	0	2
,, 10 ,, ,, 25	0	0	3
,, 25 ,, ,, 50	0	0	6
,, 50 ,, ,, 75	0	0	9
,, 75 ,, ,, 100	0	1	0
,, 100, for every £100, and also for any fractional part of £100, of such amount or value	0	1	0
Bill of Lading	0	0	6

Bill of Sale—Absolute, see *Conveyance on Sale.* By way of security, see *Mortgage*, &c.

Bond for securing the payment or repayment of money or the transfer or re-transfer of stock, see *Mortgage*, &c.

Bond in relation to any annuity upon the original creation and sale thereof. See *Conveyance on Sale.*

	£	s.	d.
Carriages.—For every carriage with four wheels, drawn by two or more horses	£2	2	0
For every carriage with four wheels, drawn by one horse	1	1	0
For every carriage with less than four wheels	0	15	0
For every carriage kept for hire, whether two or four wheels	0	15	0

STAMPS, TAXES, AND EXCISE DUTIES, ETC.

	£	s.	d.
Certificate of any goods or merchandise, having been duly entered inwards, which shall be entered outwards for exportation at the port of importation, or be removed from thence to any other port for the more convenient exportation thereof, where such certificate is issued for enabling any person to obtain a debenture or certificate entitling him to receive any drawback of any duty or duties of customs, or any part thereof	0	4	0
Charter Party	0	0	6
Contract Note for sale or purchase of stock, &c., under £100........	0	0	1
,, ,, ,, ,, ,, £100 or upwards ..	0	0	6
Conveyance or Transfer—			
1. Of stock of the Bank of England	0	7	9
2. Of stock of the East India Company........................	1	10	0
Conveyance or Transfer on sale of any property (except such stock as aforesaid), where the amount or value of the consideration for the sale does not exceed £5	0	0	6

	and does not	£	s.	d.		and does not	£	s.	d.
Exceeds £5	exceed £10	0	1	0	Exceeds £125	exceed £150	0	15	0
,, 10	,, 15	0	1	6	,, 150	,, 175	0	17	6
,, 15	,, 20	0	2	0	,, 175	,, 200	1	0	0
,, 20	,, 25	0	2	6	,, 200	,, 225	1	2	6
,, 25	,, 50	0	5	0	,, 225	,, 250	1	5	0
,, 50	,, 75	0	7	6	,, 250	,, 275	1	7	6
,, 75	,, 100	0	10	0	,, 275	,, 300	1	10	0
,, 100	,, 125	0	12	6	,, 300				

	£	s.	d.
For every £50, and also for any fractional part of £50, of such amount or value	0	5	0
Copy or Extract (certified) of or from any register of births, baptisms, marriages, deaths, or burials	0	0	1
Copy or Extract (attested or in any other manner authenticated) of or from 1. An instrument chargeable with any duty. 2. An original will, testament, or codicil. 3. The probate or probate copy of a will or codicil. 4. Any letters of administration or any confirmation of a testament. 5. Any public register (except any register of births, baptisms, marriages, deaths, or burials). 6. The books, rolls, or records of any court. In the case of an instrument chargeable with any duty not amounting to one shilling, the same duty as such instrument.			
In any other case..	£0	1	0
Declaration of any use or trust of or concerning any property by any writing, not being a deed or will, or any instrument chargeable with *ad valorem* duty as a settlement..........................	0	10	0
Deed of any kind whatsoever, not otherwise charged	0	10	0
Delivery Order	0	0	1
Dogs.—For each dog over six months old..........................	0	7	6
Exemptions—Shepherds' Dogs and those kept by blind persons for their guides.			
Grant or Licence under the sign manual to take and use a surname and arms, or a surname only; in compliance with the injunctions of any will or settlement..................................	£50	0	0
Upon any voluntary application	10	0	0

STAMPS, TAXES, AND EXCISE DUTIES, ETC.

HOUSE DUTY.—On premises of the annual value of—	£	s.	d.
£20 and not exceeding £40—shops	0	0	2
,, ,, ,, ,, houses	0	0	3
£40 ,, ,, £60—shops	0	0	4
,, ,, ,, ,, houses	0	0	6
£60 and over—shops	0	0	6
,, ,, houses	0	0	9

LEASE or TACK of any lands, tenements, &c.:—

	Not exceeding 35 years, or an indefinite term.			Exceeding 35 years, but not exceeding 100 years.			Exceeding 100 years.		
	£	s.	d.	£	s.	d.	£	s.	d.
Not exceeding £5	0	0	6	0	3	0	0	6	0
Exceeding £5 and not exceeding £10	0	1	0	0	6	0	0	12	0
,, 10 ,, ,, 15	0	1	6	0	9	0	0	18	0
,, 15 ,, ,, 20	0	2	0	0	12	0	1	4	0
,, 20 ,, ,, 25	0	2	6	0	15	0	1	10	0
,, 25 ,, ,, 50	0	5	0	1	10	0	3	0	0
,, 50 ,, ,, 75	0	7	6	2	5	0	4	10	0
,, 75 ,, ,, 100	0	10	0	3	0	0	6	0	0
,, 100, for every £50, or fractional part of £50	0	5	0	1	10	0	3	0	0

	£	s.	d.
MALE SERVANTS.—Every male servant	0	15	0

MORTGAGE, BOND, DEBENTURE, COVENANT, or WARRANT OF ATTORNEY.

	£	s.	d.
1. Being the only or principal security for the payment or repayment of money not exceeding £10	0	0	3
Exceeding £10 and not exceeding £25	0	0	8
,, 25 ,, ,, 50	0	1	3
,, 50 ,, ,, 100	0	2	6
,, 100 ,, ,, 150	0	3	9
,, 150 ,, ,, 200	0	5	0
,, 200 ,, ,, 250	0	6	3
,, 250 ,, ,, 300	0	7	6
,, 300 for every £100, and also for any fractional part of £100, of such amount	0	2	6
2. Being a collateral, or additional or substituted security, or by way of further assurance where the principal security is duly stamped. For every £100, and also for any fractional part of £100 of the amount secured	0	0	6

	£	s.	d.
PATENT MEDICINE VENDORS, Great Britain.—A separate licence is required for each place where sold	0	5	0

	£	s.	d.
POLICY OF INSURANCE upon any life or lives, or upon any event or contingency relating to or depending upon any life or lives, except for the payment of money upon the death of any person only from accident or violence, or otherwise than from a natural cause, where the sum insured does not exceed £10	0	0	1
Exceeds £10 but does not exceed £25	0	0	3
Exceeds £25 but does not exceed £500, for every full sum of £50, and also for any fractional part of £50 of the amount insured	0	0	6

	£	s.	d.
Policy of Sea Insurance where the premium does not exceed 2s. 6d. per cent	0	0	1
In other cases, for every £100, or fraction thereof, insured	0	0	3
For every policy for time, for every £100, and any fractional part of £100, thereby insured for any time not exceeding six months	0	0	3
Where the insurance shall be made for any time exceeding six months and not exceeding twelve months	0	0	6
Policy of assurance or insurance, made for a certain term or period of time upon or in relation to any ship or vessel, the following rates of duty for every £100, or fractional part of £100. Where any insurance shall be made upon any vessel lying or being in any dock, &c., for any certain term or period not exceeding one calendar month	0	0	6
Where any such insurance shall be made for any term or period exceeding one month and not exceeding three months, and also where any insurance shall be made upon any vessel lying or being elsewhere than aforesaid, for any term or period of time not exceeding three months	0	1	0
And where any insurance shall be made upon any vessel, wheresoever the same may be, for any term or period exceeding three months and not exceeding six months	0	2	0
Exceeding six months	0	4	0
Receipt given for or upon the payment of money amounting to £2 or upwards	0	0	1
Scrip Certificate or Script	0	0	1
Schedule, Inventory, or document of any kind whatsoever, referred to, in, or by, and intended to be used as part of, or as material to, any instrument charged with duty, but which is separate and distinct from, and not endorsed on or annexed to, such other instrument. Where such other instrument is chargeable with any duty not exceeding 10s., the same duty as such other instrument.			
In any other case	£0	10	0
Settlement.—Any instrument, whether voluntary or upon valuable consideration other than a *bonâ fide* pecuniary consideration, whereby any definite and certain principal sum of money, whether charged or chargeable on lands or not, &c., or to be laid out in the purchase of lands, &c., or not, or any definite and certain amount of stock, &c., is settled or agreed to be settled in any manner whatsoever. For every £100, and also for any fractional part of £100, of the amount settled	0	5	0
Tobacco and Snuff Dealers.—A separate licence is required for each place where sold.	0	5	3
Transfer, Assignment, Disposition, or Assignment of any Mortgage, &c., or of any money secured by such instrument, for every £100, and also for any fractional part of £100, of the amount transferred	0	0	6
And also where any further money is added to the money already secured, the same duty as a principal security for such further money.			
Voting Paper.—Any instrument for the purpose of voting by any person entitled to vote at any one meeting	£0	0	1

Warrant of Attorney to confess and enter up a judgment given as a security for the payment or repayment of money, or for the transfer or re-transfer of stock. See *Mortgage*, &c.

Warrant of Attorney of any other kind	£0	10	0
Warrant for Goods	0	0	3
Warrant under the sign manual of Her Majesty, her heirs or successors	0	10	0

Spoiled Stamps.—Stamps inadvertently and undesignedly spoiled will be allowed, and Postage stamps of the same value given in lieu thereof. Application for allowance must be made at Somerset House, between the hours of 11 and 3, on Monday, Tuesday, Wednesday, Thursday, and Friday, and between the hours of 10 and 1 on Saturday. Application can also be made at the Inland Revenue Offices, Great Winchester Street, for the allowance of marine policy and general spoiled stamps, on Monday, Wednesday, and Friday, between the hours of 11 and 3.

Hours at Somerset House.

Inland Revenue Office.

Daily, 10 a.m. to 5 p.m.

Receiver-General's Office.

No money received after 4 o'clock. (Saturdays, 2 o'clock.)

Stamp Office.

Stamps are issued between the hours of 10 a.m. and 4 p.m. (Saturdays, 10 to 2.) Impressed stamps, 9 a.m. to 4 p.m. (Saturdays, 9 to 2.)

INCOME TAX.

Schedule A.—Lands, Tenements, &c.	£0	0	8
Schedules C, D, and E.—Incomes	0	0	8
Schedule B.—Occupiers of Farms, &c.	0	0	4

If under £160, exempt; under £400, £160 allowed free; under £500, £100 allowed free.

POSTAL INFORMATION.

OFFICIAL POST CARDS.

Official Post Cards impressed with a halfpenny stamp, and official Reply Post Cards impressed with a halfpenny stamp on each portion of them, can be bought at every Post Office.

The address, the sender's name and address, and a request for return in case of non-delivery may be written, printed, or otherwise impressed on the front (or stamped) side; the words Forward, Local, or Immediate are not objected to. Nothing whatever may be attached, except adhesive stamps in payment of additional postage or stamp duty, and a gummed label (not to exceed 2 inches long and ¾ inch wide) bearing the address at which the card is to be delivered; nor may the card be folded, cut, or otherwise altered. If any of these rules be infringed, the card ceases to be a Post Card, and is treated as a letter liable on delivery to the usual charges.

PRIVATE CARDS.

A Private Card becomes a Post Card when it has a halfpenny stamp affixed to its face. It must be composed of ordinary cardboard, not thicker than the material used for the Official Post Card. The maximum size must correspond as nearly as may be to the size of the Inland Official Card, and the minimum size must not be less than 3¼ by 2¼ inches. The rules stated in the preceding paragraph also apply to Private Cards, with one exception, viz.: that which relates to cutting and altering. The essential feature of the Private Post Card is that it must be prepaid. A private Card without a postage stamp is not a Post Card but a letter. For instance, an unpaid Private Card, weighing less than 1oz., would be charged 2d.

PRIVATE CARDS FOR TRANSMISSION ABROAD.

Private Cards, bearing adhesive stamps of the value of one penny, may now be sent as Post Cards to places abroad, provided that they have the words "Post Card" printed on them, and are in conformity with the Official Post Cards (inland or foreign) in regard to size and substance.

This arrangement applies also to Reply Post Cards. The reply halves must bear adhesive British stamps of the value of one penny affixed by the sender of the double card, and must have printed on them the words "Post Card—Great Britain and Ireland," and "Reply;" they are available for return to the United Kingdom only.

Nothing must appear on the front of a Post Card but the stamps required for postage, postal directions, and the name and address of the sender indicated in writing or by means of a stamp or any typographical process.

The infringement of any of these Rules will render the cards liable to letter postage.

EXPRESS DELIVERY.

Letters and Parcels may now be handed in at Telegraph Offices for Express Delivery by Messenger immediately.

Live animals confined in a cage, basket, or other suitable and safe receptacle, may be accepted for delivery by Special Messenger.

Letters and Parcels may also be handed in at any Post Office, to be forwarded by mail, in which case they will take the ordinary course of post to the Express Delivery Office, and thence be conveyed direct to destination by Express Messenger. The words "Express Delivery" must be boldly and legibly marked on the left-hand side of the cover, above the address; and in the case of a letter the cover must in addition be marked with a broad perpendicular line from top to bottom, both on front and back.

Express Packets not exceeding 1lb. in weight must be prepaid the Express Fee of 3d. a mile only. Packets above 1lb. in weight must be prepaid, in addition, with a Fee of 1½d. per lb. as a weight charge for every lb. or part of a lb. after the first lb.

The Postage and Fee must be prepaid in Postage Stamps, to be affixed to a Post Office Form provided for the purpose; or in the case of articles to be forwarded by mail, to the letter or parcel.

An International Express Service has been arranged to and from a number of the Foreign Countries.

POSTAL INFORMATION.

SPECIAL DELIVERY OF LETTERS, &C., IN ADVANCE OF THE ORDINARY DELIVERIES BY POSTMEN.

Persons who desire at any time to receive their letters, or other postal packets of any kind (including parcels, book and sample packets, newspapers, and circulars), in advance of the ordinary delivery, may have them delivered by Special Messenger on payment of the following Fees, viz.:—

The full Express Fees as for one packet, and a penny for every 10, or less number, of additional packets beyond the first.

Applications for such special delivery must be signed by the person or firm to which the letters or postal packets in question are addressed. Forms of application may be obtained at any office from which deliveries are made.

The applications should be addressed to the Postmaster of the office from which the letters are ordinarily delivered, and may be delivered by hand or sent through the post prepaid. Care should be taken that the application reaches the Head Post Office on the previous evening, if it is intended to apply to the early delivery in the morning, and, if to other deliveries during the day, an hour at least before the time at which the delivery by Postmen commences.

The Express Fees on at least one packet must be prepaid in stamps affixed to the application. All additional Fees must be paid to the Special Messenger on delivery.

A letter which cannot be delivered is returned to the writer from the Returned Letter Office if it contains his address.

Redirection of Letters.—In cases of removal, notice of new address should be sent to the Postmaster in writing.

REGISTERED LETTERS.

Compensation for Loss and Damage.—By law the Postmaster General is not responsible for the safe delivery of registered articles, but subject to certain rules he will, should he consider it right to do so, give compensation for the loss or damage of Inland Registered Postal Packets of all kinds, upon prepayment of a Fee, in addition to the postage, according to the following scale, viz.:—

Fee	2d.	3d.	4d.	5d.	6d.	7d.	8d.	9d.	10d.	11d.
Compensation	£5	£10	£15	£20	£25	£30	£35	£40	£45	£50

The Fee must be prepaid by postage stamps affixed to the Packet.

The Postal Packet must be registered in accordance with the rules for the time being in force as to Inland Registered Postal Packets, and a certificate of posting, bearing thereon an acknowledgment that the fee for registration and compensation has been paid, must be obtained from the officer to whom the letter is handed. The contents of the Postal Packet must be securely packed and enclosed in a reasonably strong case, wrapper, or cover, securely fastened and of a nature calculated to preserve the contents from loss or damage in the Post, and must bear the words "Fragile, with care." These words should appear on the face of the cover above the address. If it contains any money, it must be enclosed in one of the Registered Letter Envelopes sold by the Post Office for the purpose, and if coin be enclosed, the coins must be packed in such a way as to move about as little as possible. The compensation given in respect of the loss of coin is limited to £2, whatever be the amount enclosed.

In no case will the compensation given exceed the value of the article lost or the damage sustained; and, in every case, either of loss or damage, the Postmaster General reserves the right, if he think fit, to reinstate the contents of a Postal Packet instead of giving the value in money.

POSTAL INFORMATION.

By prepaying a further Fee of 2d. the sender of a Registered Postal Packet may obtain in due course an Acknowledgment of Delivery signed by the recipient.

Registered Letter Envelopes, embossed with a 2d. stamp, are of five sizes:—

F..	5¼ × 3¼ inches.	2¼d. each, or 2s. 2½d. per dozen.	H..	8 × 5 inches.	2¾d. each, or 2s. 7d. per dozen.
G..	6 × 3¾ ,,		H2..	9 × 4 ,,	

K.. 11½ × 6 inches, 3d. each, or 2s. 10d. per dozen.

RATES OF POSTAGE.

INLAND LETTERS.

Not exceeding 1oz.	1d.	Exceeding 6ozs., not exceeding 8ozs.	3d.
Exceeding 1oz., not exceeding 2ozs.	1½d.	,, 8 ,, ,, 10 ,,	3½d.
,, 2 ,, ,, 4 ,,	2d.	,, 10 ,, ,, 12 ,,	4d.
,, 4 ,, ,, 6 ,,	2½d.	and so on, adding ½d. for every 2oz.	

The postage on Inland Letters must be paid by stamps, which should be affixed on the right hand upper corner of the address. If the gum be too wet the stamp will not adhere.

If not prepaid the postage is doubled, and in case of an insufficient prepayment the letter is charged with double the deficiency.

An Inland letter must not exceed the dimensions of one foot six inches in length, nine inches in width, and six inches in depth. The weight is unlimited.

Foreign Letters, &c., must have Stamps affixed; prepayment of letters for abroad cannot be made in money.

Postage Stamps are sold at ½d., 1d., 1½d., 2d., 2½d., 3d., 4d., 4½d., 5d., 6d., 9d., 10d., 1s., 2s. 6d., 5s., 10s., £1, £5, and are available for Postage or Receipt purposes, and for Telegrams, and in certain cases for Inland Revenue Stamp Duties.

Letter Cards, bearing 1d. for postage up to an ounce, are issued in packets of eight, price 9d.

Envelopes embossed with 1d. postage are sold of the following sizes:—

A size, square shape.		C size, 5¼ × 3 inches.		Commercial, 5¼ × 3 inches.	
1 for 1¼d.	5 for 5½d.	1 for 1¼d.	6 for 6½d.	1 for 1¼d.	5 for 5¼d.
2 ,, 2¼d.	10 ,, 11d.	2 ,, 2¼d.	8 ,, 8¾d.	2 ,, 2¼d.	10 ,, 10½d.
3 ,, 3½d.	20 ,, 1s. 10d.	3 ,, 3¼d.	12 ,, 1s. 1d.	3 ,, 3¼d.	20 ,, 1s. 9d.
4 ,, 4½d.		4 ,, 4½d.	24 ,, 2s. 2d.	4 ,, 4¼d.	240 ,, 21s.

Foreign Postage Envelopes, embossed with 2½d. postage, are issued in two sizes: "L" in packets of ten for 2s. 2½d. and "M" ten for 2s. 3d.

Envelopes, bearing an Embossed Halfpenny Stamp, suitable for Circulars, &c., entitled to transmission in open covers, at the book-rate of postage, are issued in two sizes:—

Commercial Size, 20 for 11d. Foolscap Size, 20 for 1s. And so on in proportion.

INLAND POST CARDS.

Prices of Stout Cards.				Prices of Thin Cards.			
1	¾d.	6	3¾d.	1	¾d.	6	3½d.
2	1¼d.	7	4¼d.	2	1¼d.	7	4d.
3	2d.	8	5d.	3	1¾d.	8	4½d.
4	2½d.	9	5½d.	4	2¼d.	9	5d.
5	3d.	10	6d.	5	2¾d.	10	5½d.
5s. per parcel of 100.				11s. per parcel of 240.			
£12. 6s. per quarter ream uncut.				£11. 8s. per quarter ream uncut.			

Each quarter ream contains 120 sheets, and 42 cards per sheet, or 5,040 cards.

Court or Correspondence Cards: packets of 100, 5s.; quantities of less than 10 as Stout Cards.

POSTAL INFORMATION.

PRICES OF DOUBLE OR REPLY INLAND POST CARDS.

STOUT.				THIN.			
1	1¼d.	4	5d.	1	1¼d.	4	4½d.
2	2½d.	5	6d.	2	2¼d.	5	5½d.
3	3¾d.			3	3½d.		
5s. parcel of 50.				11s. parcel of 120.			

FOREIGN POST CARDS, with impressed Stamp of 1d.; also Reply-paid Post Cards, 2d. each, are available for the Countries in the Postal Union.

INLAND BOOK POST.

The rate of postage is as follows: ½d. for every two ounces or fraction thereof.

No Book Packet may exceed one foot six inches in length, nine inches in width, and six inches in depth; and the maximum weight is limited to 5lbs.

Any Book Packet will be treated as a Letter if found to contain a Letter or communication of the nature of a Letter (not being a Circular Letter), or any enclosure sealed or in any way closed against inspection, or any other enclosure not allowed by the regulations of the Book Post, and will be charged with double Letter Postage, less the value of the stamps affixed.

Advice Notes, Bills of Lading, Invoices, Order Forms, Statements of Account, Prices Current, and Circulars, that is, Printed Notices and Letters in open covers, or ordinary envelopes left unfastened, may be sent at the book-rate.

PATTERN POST.

Trade Patterns and Samples of Merchandise are sent between places in the United Kingdom at the following rates of postage:—

For a packet not more than 4oz.	1d.
For a packet above 4oz. but not more than 6oz.	1½d.
For a packet above 6oz. but not more than 8oz.	2d.

No packet must exceed 8oz. in weight. The limits of size are 12in. by 8in. by 4in. If either of these conditions be infringed the packet will not be forwarded, but will be returned to the sender.

The Pattern Post is provided solely for *bonâ fide* Trade Patterns and Samples of Merchandise. No packet containing an article sent for sale, or in execution of an order, or from one private individual to another, will, under any circumstances, be admissible, and any such packet posted as a pattern packet will be treated as a letter and charged with double the deficient postage, at the letter-rate, together with a fine of 6d.

The patterns and samples must be sent in wrappers or open envelopes marked "Pattern Post" or "Sample Post," and so packed that they may be easily withdrawn for examination; but samples of seeds, flour, drugs, and such-like articles, which cannot be sent in open wrappers, may be enclosed in boxes in such a way as to admit of easy examination, or in bags of linen or other like material, tied at the neck. Closed bags, even if transparent, are not allowed. It is indispensable that the name, trade, and address of the trader or firm by whom the Patterns or Samples are sent out, or to whom they are being returned, be in all cases printed or stamped on the outside of the wrapper, or on the label. The number, price, and private business marks may be in writing, as well as the address; and the words "Pattern Post," "Sample Post," "Returned Patterns," or "Returned to;" but no other writing will be allowed. In case of infringement of these rules, the packet will be surcharged at the letter-rate.

No glass bottle or glass in any form may be sent; no explosive, liquid, semi-liquid, or greasy matter, nor powders of any kind which may stain or do other damage; nor any living creature. Patterns of scissors, knives, razors, and other sharp articles must be so packed and guarded as to completely prevent injury to the other contents of the mail bags, or to the officers employed, but the packets must at the same time admit of easy examination. When these requirements are not complied with the packet will be stopped.

NEWSPAPERS.

The postage on any registered newspaper for delivery in the United Kingdom is a halfpenny prepaid by stamp; and any number of newspapers, made up in one packet, can be forwarded either at Book Post rates or at the rate of a halfpenny each if they are registered newspapers.

A newspaper posted unpaid, or a packet of newspapers posted either unpaid or insufficiently prepaid, will be charged with the unpaid rate applicable to Book Packets.

Any newspaper found to contain an unauthorised enclosure will be charged as a letter.

No packet of newspapers must exceed fourteen pounds in weight, nor may it exceed two feet in length by one foot in width or depth.

Newspaper Wrappers are sold at the following prices:—

Bearing Halfpenny Stamp.		Bearing Penny Stamp.	
1 for ¾d.	7 for 4d.	1 for 1¼d.	7 for 7½d.
2 ,, 1¼d.	14 ,, 8d.	2 ,, 2¼d.	8 ,, 8½d.
3 ,, 1¾d.	21 ,, 1s.	3 ,, 3¼d.	16 ,, 1s. 5d.
4 ,, 2½d.	and so on at the	4 ,, 4¼d.	24 ,, 2s. 1½d.
5 ,, 3d.	rate of 4d. for	5 ,, 5½d.	and so on at the rate of
6 ,, 3½d.	every complete 7.	6 ,, 6½d.	8½d. for every complete 8.
£1. 2s. 10d. per parcel of 480.		£1. 1s. 3d. per parcel of 240.	

Uncut Sheets are sold only in quarter reams of 120 sheets, each sheet containing 14 wrappers, at £3. 18s. for those bearing halfpenny stamp, and £7. 8s. for those bearing penny stamp.

MONEY ORDERS.

The charge for a Money Order for England, Ireland, and Scotland is for a sum

Not exceeding £1	2d.
Exceeding £1 and not exceeding £2	3d.
,, £2 ,, ,, £4	4d.
,, £4 ,, ,, £7	5d.
,, £7 ,, ,, £10	6d.

TELEGRAPH MONEY ORDERS can be sent between Telegraph Money Order Offices.

The charge for a Foreign or Colonial Money Order is 6d. for a sum not exceeding £2, 1s. not exceeding £5, 1s. 6d. not exceeding £7, and 2s. not exceeding £10.

POSTAL ORDER RATES.

Amount of Order		Rate	Amount of Order		Rate
Amount of Order	1s.	Rate ½d.	Amount of Order	4s. 6d.	Rate 1d.
,, ,,	1s. 6d.	,, ½d.	,, ,,	5s.	,, 1d.
,, ,,	2s.	,, 1d.	,, ,,	7s. 6d.	,, 1d.
,, ,,	2s. 6d.	,, 1d.	,, ,,	10s.	,, 1d.
,, ,,	3s.	,, 1d.	,, ,,	10s. 6d.	,, 1d.
,, ,,	3s. 6d.	,, 1d.	,, ,,	15s.	,, 1½d.
,, ,,	4s.	,, 1d.	,, ,,	20s.	,, 1½d.

Postal Orders are issued and paid at every Money Order Office in the United Kingdom, and at Gibraltar, Malta, and Constantinople. Postal Orders issued in India, Straits Settlements, Hong Kong, or Newfoundland are payable in this country, but Postal Orders issued in this country are not payable there. Dog, Gun, Brewing, and Establishment Licences can be obtained at all Money Order Offices.

MEMORANDA AS TO ACTS OF PARLIAMENT RESTRAINING EXPORTATION OF TOOLS &C. USED IN COTTON LINEN WOOLLEN AND SILK MANUFACTURES.

BY Act of 14 Geo. III. c. 75 being "An Act to prevent the Exportation to Foreign Parts of Utensils made use of in the Cotton Linen Woollen and Silk Manufactures of this Kingdom" persons were prohibited from exporting "Tools or Utensils" used in the Cotton Linen Woollen and Silk Manufactures of the Kingdom.

By Act of 21 Geo. III. c. 37 being an Act to explain and amend the last-mentioned Act it was enacted—

> That if at any time after the 24th day of June 1781 any person or persons in Great Britain or Ireland shall upon any pretence whatsoever load or put on board or pack or cause or procure to be loaden put on board or packed in order to be loaded or put on board of any ship or vessel which shall not be bound directly to some port or place in Great Britain or Ireland or shall lade or cause or procure to be laden on board any boat or other vessel or shall bring or cause to be brought to any quay wharf or other place in order to be so laden or put on board any such ship or vessel *any machine engine tool press paper utensil or implement* whatsoever which now is or at any time or times hereafter shall or may be used in or proper for the preparing working pressing finishing or completing of the *Woollen Cotton Linen or Silk Manufactures* of this Kingdom or any or either of them or any other goods wherein Wool Cotton Linen or Silk or any or either of them are or is used or any part or parts of such machine engine tool press paper utensil or implement by what name or names soever the same shall be called or known; or any *model or plan or models or plans* of any such machine engine tool press paper utensil or implement or any part or parts thereof.

Any Justice might grant a warrant to seize the machines &c. and on conviction the person offending should forfeit the machines &c. and a sum of £200 and be imprisoned for twelve months without bail and until the forfeiture should be paid.

Penalties were also imposed on the Masters of Ships and Custom House Officers conniving at any offence and on persons making machines &c.

TABLE SHOWING SUMS PAYABLE IN FOREIGN CURRENCIES ON MONEY ORDERS ISSUED IN UNITED KINGDOM.

VALUE OF ENGLISH MONEY IN

English Money.			Belgium, France, and Algeria, Italy and Switzerland.		Germany and Heligoland.		Holland and Dutch East Indies.		Denmark, Iceland, Norway, and Danish West Indies.		Sweden.		Portugal, Azores, and Madeira.	Egypt.		United States, Canada, and Hawaii.	
£	s.	d.	Francs.	Cents.	Marks.	Pfen.	Florins.	Cents.	Kroner.	Ore.	Kroner.	Ore.	Reis.	Piastres.	Paras.	Dollars.	Cents.
0	0	1	0	10	0	8	0	5	0	7	0	7	10	0	16	0	2
0	0	2	0	20	0	17	0	10	0	15	0	15	30	0	32	0	4
0	0	3	0	30	0	25	0	15	0	22	0	22	50	1	8	0	6
0	0	4	0	40	0	34	0	20	0	30	0	30	70	1	25	0	8
0	0	5	0	50	0	42	0	20	0	37	0	37	90	2	1	0	10
0	0	6	0	60	0	51	0	25	0	45	0	45	110	2	17	0	12
0	0	7	0	70	0	59	0	30	0	52	0	52	130	2	33	0	14
0	0	8	0	80	0	68	0	35	0	60	0	60	150	3	10	0	16
0	0	9	0	90	0	76	0	40	0	68	0	68	170	3	26	0	18
0	0	10	1	0	0	85	0	45	0	75	0	75	190	4	2	0	20
0	0	11	1	10	0	93	0	50	0	83	0	83	200	4	18	0	22
0	1	0	1	20	1	2	0	55	0	90	0	90	220	4	35	0	24
0	2	0	2	50	2	4	1	15	1	81	1	81	450	9	30	0	48
0	3	0	3	70	3	6	1	75	2	72	2	72	680	14	25	0	73
0	4	0	5	0	4	8	2	35	3	63	3	62	910	19	20	0	97
0	5	0	6	30	5	10	2	95	4	53	4	53	1,140	24	15	1	21
0	6	0	7	50	6	12	3	55	5	44	5	43	1,370	29	10	1	46
0	7	0	8	80	7	14	4	15	6	35	6	34	1,590	34	5	1	70
0	8	0	10	0	8	16	4	75	7	26	7	24	1,820	39	0	1	94
0	9	0	11	30	9	18	5	35	8	16	8	15	2,050	43	35	2	19
0	10	0	12	60	10	20	5	95	9	7	9	6	2,280	48	30	2	43
0	11	0	13	80	11	22	6	55	9	98	9	96	2,510	53	25	2	67
0	12	0	15	10	12	24	7	15	10	89	10	87	2,740	58	20	2	93
0	13	0	16	30	13	26	7	75	11	79	11	78	2,970	63	15	3	16
0	14	0	17	60	14	28	8	35	12	70	12	68	3,190	68	10	3	40
0	15	0	18	90	15	30	8	95	13	61	13	60	3,420	73	5	3	65
0	16	0	20	10	16	32	9	55	14	52	14	50	3,650	78	0	3	89
0	17	0	21	40	17	34	10	15	15	42	15	40	3,880	82	35	4	12
0	18	0	22	60	18	36	10	75	16	33	16	31	4,110	87	30	4	38
0	19	0	23	90	19	38	11	35	17	24	17	21	4,340	92	25	4	62
1	0	0	25	20	20	40	11	95	18	15	18	12	4,570	97	20	4	87
2	0	0	50	40	40	80	23	90	36	30	36	24	9,140	195	0	9	74
3	0	0	75	60	61	20	35	85	54	45	54	36	13,710	292	20	14	61
4	0	0	100	80	81	60	47	80	72	60	72	48	18,280	390	0	19	48
5	0	0	126	0	102	0	59	75	90	75	90	60	22,850	487	20	24	35
6	0	0	151	20	122	40	71	70	108	90	108	72	27,420	585	0	29	22
7	0	0	176	40	142	80	83	65	127	5	126	84	31,990	682	20	34	9
8	0	0	201	60	163	20	95	60	145	20	144	96	36,560	780	0	38	96
9	0	0	226	80	183	60	107	55	163	35	163	8	41,130	877	20	43	83
10	0	0	252	0	204	0	119	50	181	50	181	20	45,700	975	0	48	70

INDIA.—Amounts of Money Orders, issued in the United Kingdom on India, are paid in Rupees, Annas, and Pies; the Rupee being the standard of value in India. As, however, the value of the Rupee is subject to constant variation, no tables of conversion can be given. All Orders on India are issued in Sterling, and the equivalent in Rupees is settled by the Post Office at Bombay on arrival of the Advice List from London.

Table Showing Sums Payable in English Money on Money Orders Issued in Foreign Countries, &c.

Belgium and Switzerland.		France, Algeria, and Italy.		Germany and Heligoland.		Holland and Dutch East Indies.		Denmark, Iceland, Norway, and Danish West Indies.		Sweden.		Portugal, Azores, and Madeira.	Egypt.		United States, Canada, and Hawaii.		English Money.		
Francs.	Cents.	Francs.	Cents.	Marks.	Pfen.	Florins.	Cents.	Kroner.	Ore.	Kroner.	Ore.	Reis.	Piastres.	Paras.	Dollars.	Cents.	£	s.	d.
0	11	0	11	0	9	0	6	0	8	0	8	20	0	16	0	3	0	0	1
0	22	0	21	0	18	0	11	0	16	0	16	40	0	32	0	5	0	0	2
0	32	0	32	0	26	0	16	0	23	0	23	60	1	8	0	7	0	0	3
0	43	0	42	0	35	0	21	0	31	0	31	80	1	25	0	9	0	0	4
0	53	0	53	0	43	0	26	0	38	0	38	100	2	1	0	11	0	0	5
0	64	0	63	0	52	0	31	0	46	0	46	120	2	17	0	13	0	0	6
0	74	0	74	0	60	0	36	0	54	0	54	140	2	33	0	15	0	0	7
0	85	0	84	0	69	0	41	0	61	0	61	160	3	10	0	17	0	0	8
0	95	0	95	0	77	0	46	0	69	0	69	180	3	26	0	19	0	0	9
1	6	1	5	0	86	0	51	0	76	0	76	200	4	2	0	21	0	0	10
1	16	1	16	0	94	0	56	0	84	0	84	210	4	18	0	23	0	0	11
1	27	1	26	1	3	0	61	0	91	0	91	230	4	35	0	25	0	1	0
2	53	2	52	2	5	1	22	1	82	1	82	460	9	30	0	49	0	2	0
3	80	3	78	3	8	1	83	2	73	2	72	690	14	25	0	74	0	3	0
5	6	5	4	4	10	2	44	3	64	3	63	920	19	20	0	98	0	4	0
6	33	6	30	5	13	3	4	4	55	4	53	1,150	24	15	1	22	0	5	0
7	59	7	56	6	15	3	65	5	46	5	44	1,380	29	10	1	47	0	6	0
8	86	8	82	7	18	4	26	6	37	6	35	1,600	34	5	1	71	0	7	0
10	12	10	8	8	20	4	87	7	28	7	25	1,830	39	0	1	95	0	8	0
11	39	11	34	9	23	5	48	8	19	8	16	2,060	43	35	2	20	0	9	0
12	65	12	60	10	25	6	8	9	10	9	6	2,290	48	30	2	44	0	10	0
13	92	13	86	11	28	6	69	10	1	9	97	2,520	53	25	2	68	0	11	0
15	18	15	12	12	30	7	30	10	92	10	88	2,750	58	20	2	93	0	12	0
16	45	16	38	13	33	7	91	11	83	11	78	2,980	63	15	3	17	0	13	0
17	71	17	64	14	35	8	52	12	74	12	69	3,200	68	10	3	41	0	14	0
18	98	18	90	15	38	9	12	13	65	13	59	3,430	73	5	3	66	0	15	0
20	24	20	16	16	40	9	73	14	56	14	50	3,660	78	0	3	90	0	16	0
21	51	21	42	17	43	10	34	15	47	15	41	3,890	82	35	4	14	0	17	0
22	77	22	68	18	45	10	95	16	38	16	31	4,120	87	30	4	39	0	18	0
24	4	23	94	19	48	11	56	17	29	17	21	4,350	92	25	4	63	0	19	0
25	30	25	20	20	50	12	16	18	20	18	12	4,570	97	20	4	87	1	0	0
50	60	50	40	41	0	24	32	36	40	36	24	9,140	195	0	9	74	2	0	0
75	90	75	60	61	50	36	48	54	60	54	36	13,710	292	20	14	61	3	0	0
101	20	100	80	82	0	48	64	72	80	72	48	18,280	390	0	19	48	4	0	0
126	50	126	0	102	50	60	80	91	0	90	60	22,850	487	20	24	35	5	0	0
151	80	151	20	123	0	72	96	109	20	108	72	27,420	585	0	29	22	6	0	0
177	10	176	40	143	50	85	12	127	40	126	84	31,990	682	20	34	9	7	0	0
202	40	201	60	164	0	97	28	145	60	144	96	36,560	780	0	38	96	8	0	0
227	70	226	80	184	50	109	44	163	80	163	8	41,130	877	20	43	83	9	0	0
253	0	252	0	205	0	121	60	182	90	181	20	45,700	975	0	48	70	10	0	0

Note.—In calculating amounts payable in the United Kingdom, it must be understood that the Foreign Offices of Exchange reserve to themselves the power of dealing with fractions of a penny as they may deem most convenient. For example, an Order issued in Denmark for 1 Kroner may be credited to this country either as 1s. 1d. or 1s. 2d. An order issued in Switzerland for 53 Francs may be credited either as £2. 1s. 10d. or £2. 1s. 11d.

THE TIME ALL OVER THE WORLD.

When the clock at Greenwich points to Noon the time at the various places is as follows:—

	H. M.
Boston, U.S.	7 18 a.m.
Dublin	11 35 a.m.
Edinburgh	11 47 a.m.
Glasgow	11 43 a.m.
Lisbon	11 43 a.m.
Madrid	11 45 a.m.
New York, U.S.	7 14 a.m.
Penzance	11 38 a.m.
Philadelphia, U.S.	6 59 a.m.
Quebec	7 15 a.m.
Adelaide, Australia	9 11 p.m.
Amsterdam	12 19 p.m.
Athens	1 35 p.m.
Berlin	12 54 p.m.
Berne	12 30 p.m.
Bombay	4 52 p m.
Brussels	12 17 p.m.
Calcutta	5 54 p.m.
Capetown	1 14 p.m.
Constantinople	1 56 p.m.
Copenhagen	12 50 p.m.
Florence	12 45 p.m.
Jerusalem	2 21 p.m.
Madras	5 21 p.m.
Malta	12 58 p.m.
Melbourne, Australia	9 40 p.m.
Moscow	2 30 p.m.
Munich	12 46 p.m.
Paris	12 9 p.m.
Pekin	7 46 p.m.
Prague	12 58 p.m.
Rome	12 50 p.m.
Rotterdam	12 18 p.m.
St. Petersburg	2 1 p.m.
Suez	2 10 p.m.
Sydney, Australia	10 5 p.m.
Stockholm	1 12 p.m.
Stuttgardt	0 37 p.m.
Vienna	1 6 p.m.

Hence, by a little calculation, the time for those places at any hour of our day may be ascertained. At places east of London the apparent time is later, and west of London, earlier; for uniformity sake, however, Greenwich time is kept at all railways in Great Britain and Ireland.

TOTAL ANNUAL VALUE OF PROPERTY AND INCOME ASSESSED,* 1875–95.

Year.	England.	Scotland.	Ireland.	United Kingdom.	Year.
	£	£	£	£	
1875	481,774,580	53,934,528	35,347,059	571,056,167	1875
1877	480,425,213	54,441,576	35,464,600	570,331,389	1877
1878	486,698,836	55,712,709	35,929,649	578,294,971	1878
1879	485,939,056	55,897,204	36,210,037	578,046,297	1879
1880	485,676,370	55,079,954	36,140,577	576,896,901	1880
1881	493,583,819	55,530,028	36,110,043	585,223,890	1881
1882	507,644,153	57,607,470	36,199,354	601,450,977	1882
1883	516,948,272	59,406,708	36,481,078	612,836,058	1883
1884	530,538,379	61,117,685	36,854,135	628,510,199	1884
1885	533,429,560	61,125,422	36,912,150	631,467,132	1885
1886	533,038,774	60,057,933	36,758,915	629,855,622	1886
1887	535,040,455	57,910,114	36,447,393	629,397,962	1887
1888	542,450,177	57,145,262	36,559,254	636,154,693	1888
1889	550,575,255	57,834,226	36,749,208	645,158,689	1889
1890	572,128,525	60,030,510	37,199,578	669,358,613	1890
1891	597,265,843	63,387,529	37,754,177	698,407,549	1891
1892	607,748,110	65,023,424	37,981,150	710,752,684	1892
1893	608,349,961	65,606,195	38,224,943	712,181,099	1893
1894	602,388,699	65,188,840	38,553,336	706,130,875	1894
1895	587,104,088	64,948,095	38,199,492	690,251,675	1895

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* The full annual value of lands is given under Schedule B. The profits from the occupation of farm lands were by law deemed to be equal in England and Wales to one-half, and in Scotland and Ireland to one-third the full annual value of the lands up to 1893–94. For 1894–95 a uniform rate of 3d. in the £ was fixed (by Finance Act) as the equivalent for the 8d. rate charged under other schedules of the tax.

BAROMETER INSTRUCTIONS.

COMPILED BY THE LATE ADMIRAL FITZROY, F.R.S.

The barometer should be set regularly by a duly-authorised person, about sunrise, noon, and sunset.

The words on scales of barometers should not be so much regarded for weather indications as the RISING OR FALLING of the mercury; for if it stand at CHANGEABLE (29·50) and then rise towards FAIR (30·00) it presages a change of wind or weather, though not so great as if the mercury had risen higher; and, on the contrary, if the mercury stand above FAIR and then fall it presages a change, though not to so great a degree as if it had stood lower; beside which, the direction and force of wind are not in any way noticed.

It is not from the point at which the mercury may stand that we are alone to form a judgment of the state of the weather, but from its RISING OR FALLING, and from the movements of immediately PRECEDING days as well as hours, keeping in mind effects of change of DIRECTION, and dryness or moisture, as well as alteration of force or strength of wind.

It should always be remembered that the state of the air FORETELLS COMING weather rather than shows the weather that is PRESENT—an invaluable fact too often overlooked—that the longer the time between the signs and the change foretold by them the longer such altered weather will last; and, on the contrary, the less the time between a warning and a change the shorter will be the continuance of such foretold weather.

If the barometer has been about its ordinary height, say near 30 inches at the sea-level, and is steady on rising, while the thermometer falls and dampness becomes less, north-westerly, northerly, north-easterly wind, or less wind, less rain or snow may be expected.

On the contrary, if a fall takes place with a rising thermometer and increased dampness, wind and rain may be expected from the south-eastward, southward, or south-westward. A fall with low thermometer foretells snow.

When the barometer is rather below its ordinary height, say down to near 29½ inches (at sea-level), a rise foretells less wind, or a change in its direction towards the northward, or less wet; but when it has been very low, about 29 inches, the first rising usually precedes or indicates strong wind—at times heavy squalls—from the north-westward, northward, or north-eastward, AFTER which violence a gradually rising glass foretells improving weather; if the thermometer falls, but if the warmth continues, probably the wind will back (shift against the sun's course), and more southerly or south-westerly wind will follow, especially if the barometer rise is sudden.

The most dangerous shifts of wind, or the HEAVIEST northerly gales, happen soon after the barometer first rises from a very low point; or if the wind veers GRADUALLY, at some time aftewards.

BAROMETER INSTRUCTIONS.

Indications of approaching change of weather and the direction and force of winds are shown less by the height of the barometer than by its falling or rising. Nevertheless, a height of more than 30 (30·00) inches (at the level of the sea) is indicative of fine weather and MODERATE winds, except from east to north, OCCASIONALLY.

A rapid rise of the barometer indicates unsettled weather, a slow movement the contrary; as likewise a STEADY barometer, when continued and with dryness, foretells very fine weather.

A rapid and considerable fall is a sign of stormy weather, and rain or snow. Alternate rising and sinking indicates unsettled or threatening weather.

The greatest depressions of the barometer are with gales from S.E., S., or S.W.; the greatest deviations, with wind from N.W., N., or N.E., or with calm.

A sudden fall of the barometer, with a westerly wind, is sometimes followed by a violent storm from N.W., N., or N.E.

If a gale sets in from the E. or S.E., and the wind veers by the south, the barometer will continue falling until the wind is near a marked change, when a lull MAY occur; after which the gale will soon be renewed, perhaps suddenly and violently, and the veering of the wind towards the N.W., N., or N.E. will be indicated by a rising of the barometer, with a fall of the thermometer.

After very warm and calm weather a storm or squall, with rain, may follow; likewise at any time when the atmosphere is HEATED much above the USUAL temperature of the season.

To know the state of the air not only the barometer AND THERMOMETER, but appearances of the sky should be vigilantly watched.

SIGNS OF WEATHER.

Whether clear or cloudy, a rosy sky at sunset presages fine weather; a red sky in the morning, bad weather or much wind, perhaps rain; a grey sky in the morning, fine weather; a high dawn, wind; a low dawn, fair weather.*

Soft-looking or delicate clouds foretell fine weather, with moderate or light breezes; hard-edged, oily-looking clouds, wind. A dark, gloomy, blue sky is windy, but a light, bright blue sky indicates fine weather. Generally, the softer the clouds look, the less wind (but perhaps more rain) may be expected; and the harder, more "greasy," rolled, tufted, or ragged, the stronger the coming wind will prove. Also a bright yellow sky at sunset presages wind; a pale yellow, wet; and thus, by the prevalence of red, yellow, or grey tints, the coming weather may be foretold very nearly—indeed, if aided by instruments, almost exactly.

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* A high dawn is when the first indications of daylight are seen above a bank of clouds. A low dawn is when the day breaks on or near the horizon, the first streaks of light being very low down.

BAROMETER INSTRUCTIONS.

Small inky-looking clouds foretell rain; light scud clouds driving across heavy masses show wind and rain, but if alone may indicate wind only.

High upper clouds crossing the sun, moon, or stars in a direction different from that of the lower clouds, or the wind then felt below, foretell a change of wind.

After fine, clear weather the first signs in the sky of a coming change are usually light streaks, curls, wisps, or mottled patches of white distant clouds, which increase, and are followed by an overcasting of murky vapour that grows into cloudiness. This appearance, more or less oily or watery as wind or rain will prevail, is an infallible sign.

Light, delicate, quiet tints or colours, with soft, undefined forms of clouds, indicate and accompany fine weather; but gaudy or unusual hues, with hard, definitely-outlined clouds, foretell rain, and probably strong wind.

When sea-birds fly out early and far to seaward, moderate wind and fair weather may be expected. When they hang about the land, or over it, sometimes flying inland, expect a strong wind, with stormy weather. As many creatures besides birds are affected by the approach of rain or wind, such indications should not be slighted by an observer who wishes to foresee weather.

Remarkable clearness of atmosphere near the horizon, distant objects such as hills unusually visible, or raised (by refraction),† and what is called a "good HEARING day," may be mentioned among signs of wet, if not wind, to be expected.

More than usual twinkling of the stars, indistinctness or apparent multiplication of the moon's horns, haloes, "wind-dogs" (fragments or pieces of rainbows, sometimes called "wind-galls") seen on detached clouds, and the rainbow, are more or less significant of increasing wind, if not approaching rain with or without wind.

Lastly, the dryness or dampness of the air, and its temperature (for the season), should ALWAYS be considered WITH OTHER indications of change or continuance of wind and weather.

On barometer scales the following contractions may be useful:—

RISE	FALL
FOR	FOR
N.E.LY	S.W.LY
(N.W.-N.-E.)	(S.E.-S.-W.)
DRY	WET
OR	OR
LESS	MORE
WIND.	WIND.
—	—
EXCEPT	EXCEPT
WET FROM	WET FROM
N.ED.	N.ED.

When the wind shifts against the sun,
Trust it not, for back it will run.

FIRST rise after very low
Indicates a stronger blow.

Long foretold—long last;
Short notice—soon past.

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† Much refraction is a sign of easterly wind.

METEOROLOGICAL TABLE.

This Table is used to suggest what kind of weather will probably follow the changes of the Moon.

Time of New or of Full Moon, or of entering the First or Last Quarter.	Weather likely to follow during the Quarter.	
	In Summer.	In Winter.
12 at Noon to 2 Afternoon	Very rainy	Snow or rain.
2 Afternoon to 4 ,,	Changeable	Fair and mild.
4 ,, to 6 ,,	Fair	Fair.
6 ,, to 10 ,,	Fair, if wind North-West Rainy, if South or South-West	Fair, frosty, if North or North-East. Rain or snow, if South or South-West.
10 ,, to 12 Midnight	Fair	Fair and frosty.
12 Midnight to 2 Morning	Fair	Hard frost, unless South or West.
2 Morning to 4 ,,	Cold, with showers	Snow and stormy.
4 ,, to 6 ,,	Rain	Snow and stormy.
6 ,, to 8 ,,	Wind and Rain	Stormy.
8 ,, to 10 ,,	Changeable	Cold rain, if wind West. Snow, if East.
10 ,, to 12 Noon	Frequent showers	Cold, with high wind.

REMARKS.

The nearer the time of the Moon's entrance, at full, change, and quarters, is to midnight, that is, within two hours before and after midnight, the fairer the weather will be; but the nearer to noon, the less fair. Also the Moon's entrance, at full, change, and quarters, during six of the afternoon hours, namely, from four to ten, may be followed by fair weather; but this is mostly dependent upon the wind. The same entrance during all the hours after midnight is, with the exception of the two first, unfavourable to fair weather.

MONTHLY METEOROLOGICAL TABLE FOR THE YEAR ENDING SEPTEMBER 30, 1896.

(From Official Sources.)

ROYAL OBSERVATORY, GREENWICH.—HEIGHT OF STATION ABOVE SEA LEVEL, 159 FEET.

YEAR 1895-96.	PRESSURE OF ATMOSPHERE IN MONTH.		TEMPERATURE OF AIR IN MONTH.						MEAN TEMPERATURE.		MEAN READING OF THERMOMETER.		RAIN.	
						MEAN								
Month.	Mean.	Range.	Highest.	Lowest.	Range.	of all Highest.	of all Lowest.	Daily Range.	Air.	Dew Point.	Maximum in Rays of Sun.	Minimum on Grass.	Number of days it fell.	Amount Collected.
1895.	In.	In.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Days.	In.
October	29·671	1·436	75·8	27·4	48·4	54·2	39·6	14·6	46·5	41·7	83·6	33·9	15	2·69
November ..	29·716	1·327	64·0	32·5	31·5	52·6	41·5	11·1	47·3	43·6	71·7	36·4	20	2·89
December ..	29·626	1·287	56·0	25·5	30·5	44·3	35·6	8·7	40·2	36·7	52·0	31·1	19	2·51
1896.														
January	30·173	1·583	52·9	28·3	24·6	44·4	36·2	8·2	40·5	37·4	55·2	31·8	9	0·64
February ..	30·152	1·004	56·2	24·3	31·9	45·5	35·2	10·3	40·3	35·9	67·0	30·6	6	0·35
March......	29·641	1·498	67·7	32·1	35·6	53·1	39·7	13·4	45·7	40·3	82·1	35·3	22	3·00
April	29·976	0·814	69·0	33·6	35·4	57·4	41·1	16·3	48·6	40·7	98·8	35·8	10	0·56
May........	30·046	0·609	78·4	35·8	42·6	66·1	44·5	21·6	54·8	43·9	123·5	40·7	5	0·27
June	29·766	0·774	86·7	39·8	46·9	75·3	53·5	21·8	63·4	52·7	130·2	50·3	14	1·94
July........	29·843	0·563	91·1	47·3	43·8	77·6	54·8	22·8	65·2	52·3	133·5	51·1	7	1·07
August	29·848	0·621	76·2	45·7	30·5	69·0	51·7	17·3	59·2	51·6	113·4	48·2	15	2·06
September ..	29·592	1·764	71·5	40·3	31·2	64·5	51·2	13·3	56·7	52·0	101·4	48·5	23	5·54

MONTHLY METEOROLOGICAL TABLE FOR THE YEAR ENDING SEPTEMBER 30, 1896.

(From Official Sources.)

THE OBSERVATORY, LIVERPOOL.—HEIGHT OF STATION ABOVE SEA LEVEL, 197 FEET.

YEAR 1895-96.	PRESSURE OF ATMOSPHERE IN MONTH.		TEMPERATURE OF AIR IN MONTH.						MEAN TEMPERATURE.		MEAN READING OF THERMOMETER.		RAIN.	
Month.	Mean.	Range.	Highest.	Lowest.	Range.	MEAN			Air.	Dew Point.	Maximum in Rays of Sun.	Minimum on Grass.	Number of days it fell.	Amount Collected.
						of all Highest.	of all Lowest.	Daily Range.						
1895.	In.	In.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	* Deg.	* Deg.	Days.	In.
October	29·602	1·446	68·7	26·8	41·9	51·1	41·1	10·0	45·4	40·3	88·1	31·8	22	5·44
November ..	29·600	1·460	61·0	35·2	25·8	50·1	40·4	9·7	45·1	40·4	74·7	36·0	14	2·41
December ..	29·510	1·438	53·6	24·3	29·3	43·9	36·1	7·8	40·0	35·6	57·4	29·9	19	2·43
1896.														
January	30·086	1·657	54·1	24·7	29·4	45·7	37·8	7·9	41·6	37·5	62·2	33·2	13	1·25
February ..	30·049	1·108	56·7	26·3	30·4	45·9	35·9	10·0	40·7	36·9	68·7	31·9	11	0·79
March......	29·513	1·688	55·7	33·7	22·0	49·1	38·7	10·4	43·4	37·5	94·5	31·6	24	3·42
April	29·916	0·812	64·6	37·8	26·8	53·5	43·8	9·7	47·6	41·3	111·7	34·8	14	1·15
May	30·052	0·596	73·5	40·2	33·3	61·2	47·2	14·0	53·3	43·3	129·2	37·2	6	0·42
June	29·714	0·734	84·2	48·9	35·3	67·8	54·5	13·3	59·6	50·0	140·6	46·5	17	4·38
July........	29·781	0·758	74·4	50·3	24·1	67·3	54·7	12·6	59·5	53·1	131·0	47·3	14	2·67
August	29·810	0·711	71·2	47·3	23·9	63·4	53·5	9·9	57·1	49·0	130·1	45·5	18	2·50
September ..	29·477	1·758	68·1	44·2	23·9	61·0	51·0	10·0	54·8	49·9	106·1	44·6	27	4·46

* The Mean temperature inserted in these two columns is taken from the Returns of Stonyhurst College, Lancashire, as they were not supplied by Liverpool. The height of station above sea level is 363 feet.

MONTHLY METEOROLOGICAL TABLE FOR THE YEAR ENDING SEPTEMBER 30, 1896.

(From Official Sources.)

THE OBSERVATORY, CARLISLE, SPITAL (CUMBERLAND).—HEIGHT OF STATION ABOVE SEA LEVEL, 114 FEET.

YEAR 1895-96.	PRESSURE OF ATMOSPHERE IN MONTH.		TEMPERATURE OF AIR IN MONTH.						MEAN TEMPERATURE.		MEAN READING OF THERMOMETER.		RAIN.	
						MEAN								
Month.	Mean.	Range.	Highest.	Lowest.	Range.	of all Highest.	of all Lowest.	Daily Range.	Air.	Dew Point.	Maximum in Rays of Sun.	Minimum on Grass.	Number of days it fell.	Amount Collected.
1895.	In.	In.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Days.	In.
October	29·656	1·586	78·6	19·0	59·6	52·3	34·9	17·4	43·2	37·2	77·3	31·9	17	4·04
November ..	29·659	1·594	57·8	24·8	33·0	49·9	36·8	13·1	43·6	39·0	65·7	33·1	18	3·16
December ..	29 561	1·504	50·0	20·8	29·2	42·6	32·2	10·4	38·3	34·3	52·4	29·4	19	3·08
1896.														
January	30·114	1·900	53·2	19·4	33·8	45 7	34·9	10·8	41·0	38·3	55·4	32·4	18	1·92
February ..	30·098	1·118	54·4	25·2	29·2	48 0	36 0	12·0	41·8	38·9	64·3	33 1	12	1·54
March......	29·533	1·742	58·6	26·8	31·8	50·4	35·1	15·3	42·5	39·6	79·0	32·2	21	4·24
April	29·936	0·890	65·8	25·2	40·6	56·8	40·0	16·8	48·2	42·8	93·7	36·8	18	2·30
May........	30·112	0·642	78·4	29·2	49·2	66·9	42·6	24·3	54·2	47·1	106·1	38·8	5	0·58
June	29·763	0·716	86·0	37·5	48·5	71·3	50·2	21·1	58·9	52·4	109·4	47·5	19	3·54
July........	29·852	0·734	77·5	39·2	38·3	69·2	50·9	18·3	59·1	54·2	103·4	48·6	15	3·44
August	29·848	0·754	73·2	39·0	34·2	67·2	48·6	18·6	56·8	53·1	105·2	45·2	17	2·08
September ..	29·523	1·680	73 2	34·2	39·0	63·7	47·7	16·0	55·0	51·3	89·8	43·9	22	4·08

REMARKS ON THE WEATHER.

(From Official Sources.)

October, 1895.—The weather was dull and wet till the 10th, then generally bright and fine to the end of the month, with a remarkably cold period extending from the 24th to the 30th. The mean high day temperature was 3°·5, and the mean low night temperature 3°·6 below their averages. The mean daily temperature of the air was above its average on the 1st, being as much as 9°·3 in excess; below from the 2nd to the 11th; above from the 12th to the 15th; and below again from the 16th to the 31st; being particularly so from the 24th to the 30th; the mean daily deficiency for these seven days was 10°·8. The atmospheric pressure was below its average from the 1st to the 10th; and from the 22nd to the 29th; and above on all other days. The fall of rain was greatly in excess of the average at extreme southern stations, a little below the average at stations near London, and somewhat above at most northern stations. The west wind was very prevalent. Thunderstorms occurred on the 2nd at Osborne; on the 25th at Guernsey, Truro, Barnstaple, and Liverpool; and on the 27th at Guernsey. Snow fell on the 21st at Hereford; on the 22nd at Halifax; on the 24th at Liverpool and Leeds; on the 25th at Nottingham, Liverpool, Halifax, and Leeds; on the 26th at Truro, Whitchurch, Coventry, Liverpool, Halifax, Hull, Leeds, and Stonyhurst; on the 27th at Oxford, Nottingham, and Liverpool; on the 28th at Liverpool and Stonyhurst; and on the 29th at Cambridge. Fog prevailed on the 1st at Halifax; on the 15th at Osborne, Strathfield Turgiss, Croydon, the Royal Observatory, Cambridge, and Halifax; on the 17th at Croydon; on the 18th at Strathfield Turgiss, Oxford, Cambridge, and Leeds; on the 19th at Strathfield Turgiss and Leeds; on the 20th at Leeds; on the 21st at Royston and Leeds; on the 24th at Truro, Halifax, and Leeds; on the 25th at Stonyhurst; on the 26th at Whitchurch, Royston, Lowestoft, and Somerleyton; on the 27th at Oxford; on the 28th at Truro, the Royal Observatory, Oxford, and Lowestoft; on the 29th at Royston and Cambridge; on the 30th at Truro; and on the 31st at Royston and Halifax.

November.—The weather was mild, dull, and wet. The mean high day temperature of the air was 3°·7, and the mean low night was 3°·8 above their averages. The mean daily temperature of the air was below its average from the 1st to the 3rd, and from the 23rd to the 27th; and above on all other days, being particularly so on the 6th, 7th, 16th, and 29th days, when it was as much as 10°·5, 10°·7, 13°·0, and 9°·6 respectively above. The atmospheric pressure was below its average from the 3rd to the 16th, and from the 28th to the 30th; and above on the 1st and 2nd, and from the 17th to the 27th. The fall of rain was large, and greatly in excess of the average at all stations south of Croydon; and generally a little above at all other stations. The south and west winds were prevalent. Thunderstorms occurred on the 6th at Osborne; on the 11th at Guernsey, Salisbury, and Royston; on the 13th at Halifax; and on the 14th at Hereford. Aurora borealis was seen on the 9th at Oxford, Halifax, and Stonyhurst. Fog prevailed on the 1st at Strathfield Turgiss, Croydon, Whitchurch, the Royal Observatory, Royston, and Cambridge; on the 2nd at Croydon, Royston, Cambridge, Coventry, and Halifax; on the 3rd at Truro, Strathfield Turgiss, Whitchurch, Cambridge, Coventry, and Wolverhampton; on the 4th at Osborne, Whitchurch, Royston, Cambridge, Wolverhampton, and Halifax; on the 5th at Coventry, Wolverhampton, and Halifax; on the 8th at

Truro and Osborne; on the 12th at Guernsey; on the 18th at Osborne, Whitchurch, and Oxford; on the 19th at Strathfield Turgiss, Wolverhampton, and Halifax; on the 20th at Halifax; on the 21st at Oxford and Halifax; on the 22nd at Truro, Osborne, Oxford, Royston, Cambridge, Wolverhampton, and Halifax; on the 27th at Strathfield Turgiss, Wolverhampton, and Halifax; on the 28th at Osborne, Oxford, Cambridge, and Halifax; on the 29th at Whitchurch and Halifax; and on the 30th at Halifax.

December.—The weather was generally mild, dull, and gloomy, with frequent rain at the middle and towards the end of the month. The mean high day temperature of the air was of the same value as its average, and the mean low night temperature 0°·8 above its average. The mean daily temperature of the air was above its average from the 1st to the 18th, and from the 29th to the 31st, being particularly so on the 5th and 30th, when it was as much as 11°·9 and 13°·1 respectively above; and below its average from the 19th to the 28th. The atmospheric pressure was above its average from the 1st to the 4th; and generally below from the 5th to the 31st; being as much as 0·74in. and 0·80in. below on the 15th and 16th respectively. The fall of rain was exceptionally heavy at Guernsey and Truro, being as large as 6·29in. at the former, and 8·88in. at the latter station; whilst at all other stations the fall was somewhat in excess of the average. Light falls of snow were experienced at most stations during the latter end of the month. Thunderstorms occurred on the 16th at Hereford and Halifax; on the 12th at Oxford and Hereford; on the 13th at Halifax; and on the 15th at Guernsey. Aurora borealis was seen on the 7th at Halifax and Stonyhurst. Fog prevailed on the 1st at Strathfield Turgiss; on the 2nd at Croydon; on the 9th at Whitchurch, Lowestoft, Somerleyton, Halifax, and Stonyhurst; on the 10th at Truro, Oxford, Cambridge, and Coventry; on the 11th at Whitchurch, the Royal Observatory, and in the Midland counties; on the 12th at Lowestoft and Wolverhampton; on the 14th at Somerleyton and Halifax; on the 16th at Halifax; on the 17th at Wolverhampton; on the 18th at Strathfield Turgiss and Halifax; on the 20th at Oxford and Royston; on the 21st at the Royal Observatory, Oxford, Royston, Cambridge, Coventry, and Halifax; on the 22nd at Whitchurch, Royal Observatory, Cambridge, and Halifax; on the 28th at Royston; on the 29th at Truro, Royston, Coventry, Lowestoft, Somerleyton, and Halifax; on the 30th at Osborne and Halifax; and on the 31st at Truro, Royston, Cambridge, and Lowestoft.

January, 1896.—The weather was mild and dull, with very little sunshine. The mean high day temperature of the air was 1°·8, and the mean low night temperature 3°·0, above their averages. The mean daily temperature of the air was above its average from the 1st to the 5th, from the 11th to the 19th, and from the 24th to the 28th; and generally below on all other days. The readings of the barometer were very high, being exceptionally so on the 9th, 10th, 29th, 30th, and 31st days, when the mean daily value was as much as 0·98in., 0·85in., 0·91in., 0·93in., and 0·84in. respectively in excess of the average. The atmospheric pressure was above its average throughout the month, with the exception of the 13th, 14th, and 15th days, when it was below. The fall of rain was small, and below its average at all stations. At Greenwich the fall for the month was 0·64in., and there are only six instances of as small or smaller fall in the month of January back to 1815, viz.:—

	in.		in.		in.
1892	0·38	1861	0·55	1826	0·30
1880	0·30	1829	0·40	1822	0·60

REMARKS ON THE WEATHER.

The following are the instances of as small or smaller falls of rain in any two consecutive months in the preceding 81 years:—

		in.			in.
1818	July and August....	0·90	1870	April and May	0·75
1825	June and July......	0·90	1870	May and June	0·86
1840	March and April....	0·40	1893	March and April....	0·55
1844	April and May	0·70	1893	April and May......	0·65
1852	March and April	0·70	1895	May and June......	0·66

The above figures also apply to the following month.

Snow fell on the 7th at Croydon; on the 9th at Stonyhurst; on the 10th at Strathfield Turgiss and Croydon; and on the 13th at Halifax. Fog prevailed in January on the 1st at Guernsey, Truro, Bath, Whitchurch, and Halifax; on the 2nd at Somerleyton and Halifax; on the 3rd at Guernsey, Whitchurch, and in the Midland counties; on the 4th at Guernsey, Bath, and in the Midland counties; on the 5th at Wolverhampton; on the 6th at Bath and Wolverhampton; on the 7th at Truro, Wolverhampton, Halifax, Stonyhurst, and Carlisle; on the 8th at Whitchurch and Wolverhampton; on the 11th at Cambridge; on the 19th at Oxford and Coventry; on the 20th at Croydon, Oxford, Royston, Cambridge, Somerleyton, and Leeds; on the 21st at Truro, Bath, and in the Midland and Northern counties; on the 22nd at Cambridge, Somerleyton, Wolverhampton, Halifax, and Leeds; on the 23rd at Truro, Bath, Strathfield Turgiss, Royal Observatory, Oxford, Cambridge, and Lowestoft; on the 24th at Halifax; on the 26th at Oxford, Cambridge, Lowestoft, Somerleyton, Halifax, and Leeds; on the 27th at Lowestoft, Somerleyton, and Leeds; on the 28th at Strathfield Turgiss; on the 29th at Truro, Royal Observatory, and Oxford; on the 30th at Osborne, Strathfield Turgiss, Croydon, Whitchurch, Royal Observatory, and Oxford; and on the 31st at Lowestoft and Somerleyton.

February.—The weather was changeable, but was for the most part dry, dull, and mild. The mean high day temperature was 0°·3, and the mean low night temperature 1°·1 above their averages. The mean daily temperature of the air was above its average from the 5th to the 15th, from the 19th to the 21st, and on the 28th and 29th; and below on all other days. The atmospheric pressure was above its average from the 1st to the 18th; below from the 19th to the 21st; and above again from the 22nd to the end of the month. The fall of rain was small, and greatly below its average at all stations. At Greenwich the fall for the month was 0·35in.; and there are only four instances of as small or smaller fall in the month of February back to 1815, viz.:—

	in.		in.
1895	0·22	1857	0·20
1891	0·05	1821	0·04

The total fall of rain was 0·99in., and there is no instance of a fall so small in the month of February back to the year 1815; the nearest approach is 1·70in. in 1822, 1829, 1859, and 1864. Aurora borealis was seen on the 24th at Truro. Snow fell on the 26th at Oxford and Royston. Fog prevailed on the 1st at Somerleyton; on the 3rd at Wolverhampton and Leeds; on the 4th at Somerleyton and Leeds; on the 5th at Osborne, Whitchurch, Oxford, Somerleyton, and Stonyhurst; on the 6th at Truro, Oxford, Somerleyton, and Stonyhurst; on the 7th at Somerleyton and Wolverhampton; on the 10th at Truro, Osborne, Whitchurch, and Wolverhampton; on the 11th at Guernsey and Osborne; on the 12th at Guernsey and Truro; on the 13th at Truro; on the 14th at Truro and Stonyhurst; on the 15th at Truro, Royston, Lowestoft, and Somerleyton; on the 18th at Whitchurch, Wolverhampton, and Halifax; on the 19th at Whitchurch and Wolverhampton; on the 20th at Royston; on the 21st at Truro and Royston; on the 27th at Halifax and Leeds; and on the 29th at Halifax.

March.—The weather was mild, dull, and wet. The mean high day temperature was 3°·3, and the mean low night temperature 4°·7 above their averages. The mean daily temperature of the air was above its average from the 1st to the 26th, being as much as 14°·6 in excess on the 22nd, and on several other days was as much as 10° and 11° above the average; and below its average from the 27th to the 31st. The atmospheric pressure was generally below its average throughout the month, being particularly so on the 3rd and 4th, when it was as much as 1·15in. below on both days. The fall of rain was generally above its average. The west wind was very prevalent; and at the end of the quarter vegetation was very forward. Thunderstorms occurred on the 16th at Halifax; on the 22nd at Osborne, Salisbury, Royston, and Cambridge; on the 24th at Wolverhampton, Llandudno, Halifax, and Stonyhurst; and on the 25th at Stonyhurst. Snow fell on the 1st at Halifax; on the 3rd at Croydon, Royal Observatory, Royston, Halifax, and Stonyhurst; on the 4th at Halifax and Carlisle; on the 6th at Carlisle; on the 13th and 15th at Halifax; on the 26th at Stonyhurst; on the 27th at Coventry and Halifax; on the 28th at Osborne, Hereford, Coventry, Halifax, and Stonyhurst; and on the 29th at Halifax. Fog prevailed on the 10th at Guernsey, Coventry, and Stonyhurst; on the 11th, 13th, and 14th at Guernsey; on the 19th at Croydon; and on the 23rd at Guernsey, Osborne, Whitchurch, and Royston.

April.—The weather was for the first 17 days generally dull, with frequent rain, then fine and bright from the 18th to the end of the month. The mean high day temperature of the air was of the same value as the average, and the mean low night temperature was 2°·1 above. The mean daily temperature of the air was above its average from the 5th to the 12th, and from the 17th to the 29th; and below on all other days. The atmospheric pressure was generally above its average from the 1st to the 27th, and below from the 28th to the 30th. The fall of rain was small, and below its average at all stations. At Greenwich the fall for the month was 0·56in., and there are only thirteen instances of as small or smaller fall in the month of April back to 1815, viz.:—

	in.		in.		in.
1893	0·12	1852	0·50	1834	0·50
1870	0·28	1844	0·40	1832	0·40
1865	0·40	1842	0·40	1817	0·10
1863	0·40	1840	0·10		
1855	0·10	1838	0·50		

Thunderstorms occurred on the 20th at Wolverhampton; on the 28th at Carlisle; and on the 29th at Hull and Carlisle. Snow fell on the 11th and 12th at Halifax; on the 28th at Carlisle; and on the 29th at Coventry and Halifax. Fog prevailed on the 19th at Whitchurch and Lowestoft; on the 21st at Cambridge; on the 22nd at Somerleyton; and on the 27th at Guernsey.

May.—The weather was remarkable for its small rainfall, unusual amount of sunshine, and fineness generally. The mean high day temperature of the air was 1°·7, and the mean low night temperature 0°·7, above their averages. The mean daily temperature of the air was below its average from the 1st to the 4th, and from the 20th to the 26th; and above on all other days, being as much as 11°·7 and 10°·8 in excess of the average on the 12th and 18th respectively. The atmospheric pressure was above its average throughout the month, with the exception of two days, the 20th and 22nd, which were below. The fall of rain was small, and greatly below its average. At Greenwich the fall for the month was 0·27in.; and there is only one instance of a less fall in the month of May back to 1815, viz., in 1833, when it was 0·20in. Thunderstorms occurred on the 12th at Royston and Cambridge; on the 13th at Hereford; and on the 20th at Royston and Lowestoft. Aurora borealis was seen on the 2nd at Cambridge; and on the 3rd at Oxford and Cambridge. Fog prevailed on the 10th and 11th at Royston; on the 18th at Lowestoft; and on the 29th at Guernsey.

The total fall of rain in the five months, January to May, at Greenwich was 4·8in., and there is only one instance of a smaller fall in the months of January to May in the preceding 81 years, viz., in 1874, January to May, the fall was 4·20in. The next smallest falls for the five months are 4·83in. in 1870, and 4·97in. in 1895. The average fall in the months of January to May for the preceding 81 years is 8·64in.

The total fall of rain in April and May at Greenwich was 0·83in., and there are only three instances of as small or smaller fall in these two months in the preceding 81 years, viz.:—1844, 0·70; 1870, 0·75; 1893, 0·65.

June.—The weather was warm and bright. The mean high day temperature of the air 4°·3, and the mean low night temperature 3°·6 above their averages. The mean daily temperature of the air was generally above its average throughout the month, being as much as 11°·0, 11°·4, and 13°·3 in excess of its average on the 4th, 15th, and 16th respectively. The atmospheric pressure was generally below its average from the 1st to the 17th, and above on all other days. The fall of rain was a little above its average at all stations. Thunderstorms occurred on the 2nd at Hull; on the 3rd at Halifax and Leeds; on the 4th at Osborne, Salisbury, Croydon, Royal Observatory, Wolverhampton, Llandudno, Halifax, Hull, and Leeds; on the 6th at Halifax, Hull, and Leeds; on the 7th at Guernsey, Halifax, and Leeds; on the 8th at Halifax, Hull, and Leeds; on the 9th at Coventry; on the 10th at Lowestoft and Somerleyton; on the 15th at Osborne; on the 16th at Halifax and Leeds; on the 19th at Leeds; on the 20th at Hull and Leeds; on the 24th at the Royal Observatory and Royston; and on the 25th at Osborne, Croydon, Whitchurch, Royal Observatory, and Royston. Fog prevailed on the 9th at Guernsey and Royston; on the 10th at Royston and Lowestoft; on the 14th at Royston, Lowestoft, and Somerleyton; on the 15th at Royston; and on the 16th at Guernsey.

July.—The weather was generally fine, bright, and warm. The mean high day temperature of the air was 3°·7, and the mean low night temperature 1°·7 above their averages. The mean daily temperature of the air was above its average from the 3rd to the 15th, and from the 18th to the 30th, being particularly so on the 7th, 8th, 9th, 13th, 14th, 20th, and 21st days, when it was as much as 8°·8, 9°·2, 10°·1, 8°·3, 10°·2, 9°·4, and 10°·6 respectively above, and below its average on all other days. The atmospheric pressure was generally above its average from the 10th to the 28th, and generally below from the 1st to the 9th, and from the 29th to 31st. The fall of rain was small, and generally below its average. Thunderstorms occurred on the 7th at Guernsey, Salisbury, Barnet, Royston, Coventry, and Hull; on the 8th at Lowestoft; on the 9th at Liverpool, Halifax, and Stonyhurst; on the 14th at Lowestoft; on the 15th at Croydon; on the 26th at Guernsey and Osborne; and on the 30th at Coventry. Aurora borealis was seen on the 4th at Halifax. Fog prevailed on the 2nd at Guernsey; and on the 8th at Wolverhampton.

REMARKS ON THE WEATHER.

August.—The weather was cold and unsettled, with very little sunshine. The mean high day temperature of the air was 3°·8, and the mean low night temperature 1°·3 below their averages. The mean daily temperature of the air was below its average throughout the month, with the exception of the 12th, 13th, 14th, 23rd, and 24th days, which were above. The atmospheric pressure was generally above its average from the 1st to the 18th, and generally below from the 19th to the end of the month. The fall of rain was below its average at some stations, and above at others. Thunderstorms occurred on the 7th at Lowestoft and Somerleyton; on the 8th at Guernsey, Osborne, Bath, Royal Observatory, Oxford, Hereford, and Cambridge; on the 19th at Osborne, Salisbury, Bath, Royal Observatory, and Hull; on the 25th at the Royal Observatory; on the 26th at Osborne, Oxford, Lowestoft, Somerleyton, and Hull; and on the 31st at Osborne, Oxford, and Halifax. Aurora borealis was seen on the 7th and 8th at Lowestoft. Fog prevailed on the 11th at Cambridge; and on the 31st at Halifax.

September.—This month was remarkable for its large rainfall, the weather being wet, dull, and gloomy throughout. The mean high day temperature of the air was 2°·9 below the average, and the mean low night temperature 2°·1 above. The mean daily temperature of the air was below its average from the 1st to the 3rd, generally above from the 4th to the 18th, and generally below from the 19th to 30th. The atmospheric pressure was below its average from the 1st to the 27th, being particularly so on the 13th, 22nd, and 25th days, when it was as much as 0·77in., 0·74in., and 0·98in., respectively below; and above its average from the 28th to the 30th, being 0·56in. in excess on the 30th. The fall of rain was large and greatly in excess of the average at all stations. At Greenwich the fall for the month was 5·54ins., or 3·24ins. above the average, and there is no instance of so large a fall in the month of September back to 1815, the nearest approach being 5·00ins. in 1839. The following are the instances of a larger fall in any month in the preceding 81 years:—

	in.		in.		in.
1888 July it was	6·75	1865 Oct. it was	6·00	1841 Oct. it was	6·00
1880 Oct. ,,	7·70	1860 June ,,	5·80	1831 Oct. ,,	5·50
1876 Dec. ,,	5·80	1853 July ,,	6·00	1828 July ,,	7·00
1867 July ,,	5·80	1852 Nov. ,,	6·00		

Thunderstorms occurred on the 1st at Guernsey and Osborne; on the 2nd at Osborne; on the 5th at Whitchurch; on the 8th at Salisbury, Bath, Croydon, Whitchurch, Royal Observatory, Oxford, and Hereford; on the 9th at Oxford, Wolverhampton, and Halifax; on the 10th at Cambridge and Halifax; on the 11th at Wolverhampton and Stonyhurst; on the 12th at Hereford, Halifax, and Stonyhurst; on the 13th and 16th at Halifax; on the 18th at Osborne and Halifax; and on the 20th at Salisbury, Whitchurch, Royal Observatory, and Oxford. Aurora borealis was seen on the 28th at Halifax. Fog prevailed on the 1st at Cambridge, Lowestoft, and Somerleyton; on the 4th at Wolverhampton; on the 8th at Hereford; on the 11th at Cambridge; and on the 30th at Oxford, Cambridge, Wolverhampton, and Stonyhurst.

DAILY TIDE TABLES AT LIVERPOOL FOR THE YEAR 1897.

JANUARY.				FEBRUARY.				MARCH.				APRIL				MAY.				JUNE.			
Date.	Day.	**LIVERPOOL** High Water.		Date.	Day.	**LIVERPOOL** High Water.		Date.	Day.	**LIVERPOOL** High Water.		Date.	Day.	**LIVERPOOL** High Water.		Date.	Day.	**LIVERPOOL** High Water.		Date.	Day.	**LIVERPOOL** High Water.	
		Morn.	Aftern.			Morn.	Aftern.			Morn.	Aftern.			Morn.	Aftern.			Morn.	Aftern.			Morn.	Aftern.
		h m	h m			h m	h m			h m	h m			h m	h m			h m	h m			h m	h m
1	F	9 29	9 57	1	M	11 11	11 32	1	M	10 17	10 37	1	Th	11 3	11 19	1	S	11 3	11 19	1	Tu	11 49	..
2	S	10 24	10 50	2	Tu	11 53	..	2	Tu	10 57	11 16	2	F	11 34	11 49	2	𝔖	11 35	11 52	2	W	0 8	0 26
3	𝔖	11 16	11 41	3	W	0 13	0 32	3	W	11 33	11 49	3	S	..	0 5	3	M	..	0 9	3	Th	0 43	1 1
4	M	..	0 6	4	Th	0 50	1 7	4	Th	..	0 5	4	𝔖	0 21	0 36	4	Tu	0 25	0 42	4	F	1 19	1 38
5	Tu	0 29	0 51	5	F	1 24	1 39	5	F	0 21	0 37	5	M	0 51	1 6	5	W	0 59	1 16	5	S	1 58	2 19
6	W	1 11	1 31	6	S	1 54	2 9	6	S	0 52	1 7	6	Tu	1 21	1 36	6	Th	1 33	1 51	6	𝔖	2 40	3 2
7	Th	1 50	2 8	7	𝔖	2 24	2 39	7	𝔖	1 21	1 35	7	W	1 51	2 7	7	F	2 10	2 30	7	M	3 25	3 50
8	F	2 25	2 43	8	M	2 54	3 10	8	M	1 49	2 3	8	Th	2 24	2 43	8	S	2 52	3 15	8	Tu	4 19	4 49
9	S	3 0	3 18	9	Tu	3 27	3 45	9	Tu	2 18	2 34	9	F	3 4	3 28	9	𝔖	3 41	4 13	9	W	5 21	5 56
10	𝔖	3 36	3 55	10	W	4 8	4 34	10	W	2 50	3 7	10	S	3 59	4 34	10	M	4 48	5 26	10	Th	6 32	7 5
11	M	4 17	4 42	11	Th	5 6	5 47	11	Th	3 26	3 51	11	𝔖	5 16	6 4	11	Tu	6 7	6 44	11	F	7 35	8 4
12	Tu	5 9	5 42	12	F	6 35	7 23	12	F	4 22	5 0	12	M	6 51	7 31	12	W	7 17	7 47	12	S	8 34	9 3
13	W	6 19	7 0	13	S	8 7	8 48	13	S	5 47	6 41	13	Tu	8 5	8 35	13	Th	8 16	8 42	13	𝔖	9 31	9 59
14	Th	7 39	8 15	14	𝔖	9 22	9 49	14	𝔖	7 30	8 13	14	W	9 1	9 23	14	F	9 6	9 29	14	M	10 27	10 55
15	F	8 50	9 20	15	M	10 12	10 33	15	M	8 49	9 19	15	Th	9 44	10 4	15	S	9 52	10 15	15	Tu	11 23	11 50
16	S	9 46	10 9	16	Tu	10 52	11 11	16	Tu	9 43	10 3	16	F	10 23	10 44	16	𝔖	10 40	11 6	16	W	..	0 16
17	𝔖	10 30	10 51	17	W	11 30	11 49	17	W	10 21	10 40	17	S	11 6	11 28	17	M	11 32	11 57	17	Th	0 41	1 5
18	M	11 12	11 32	18	Th	..	0 8	18	Th	10 59	11 18	18	𝔖	11 51	..	18	Tu	..	0 23	18	F	1 29	1 53
19	Tu	11 51	..	19	F	0 27	0 46	19	F	11 37	11 57	19	M	0 14	0 37	19	W	0 49	1 15	19	S	2 16	2 39
20	W	0 10	0 30	20	S	1 5	1 24	20	S	..	0 18	20	Tu	1 1	1 24	20	Th	1 40	2 5	20	𝔖	3 1	3 23
21	Th	0 50	1 9	21	𝔖	1 43	2 2	21	𝔖	0 39	1 0	21	W	1 48	2 12	21	F	2 30	2 56	21	M	3 45	4 8
22	F	1 28	1 47	22	M	2 22	2 43	22	M	1 21	1 41	22	Th	2 37	3 4	22	S	3 22	3 49	22	Tu	4 33	4 59
23	S	2 6	2 26	23	Tu	3 3	3 24	23	Tu	2 2	2 23	23	F	3 32	4 3	23	𝔖	4 19	4 51	23	W	5 28	6 0
24	𝔖	2 46	3 6	24	W	3 48	4 17	24	W	2 45	3 10	24	S	4 39	5 20	24	M	5 24	6 0	24	Th	6 34	7 7
25	M	3 26	3 48	25	Th	4 54	5 38	25	Th	3 37	4 9	25	𝔖	6 6	6 50	25	Tu	6 37	7 9	25	F	7 39	8 9
26	Tu	4 13	4 43	26	F	6 31	7 25	26	F	4 47	5 33	26	M	7 27	8 0	26	W	7 38	8 6	26	S	8 38	9 5
27	W	5 17	5 58	27	S	8 12	8 54	27	S	6 27	7 17	27	Tu	8 29	8 55	27	Th	8 32	8 56	27	𝔖	9 30	9 52
28	Th	6 45	7 32	28	𝔖	9 28	9 55	28	𝔖	7 59	8 37	28	W	9 16	9 36	28	F	9 18	9 38	28	M	10 13	10 34
29	F	8 14	8 54					29	M	9 7	9 31	29	Th	9 55	10 12	29	S	9 57	10 16	29	Tu	10 54	11 13
30	S	9 30	10 1					30	Tu	9 52	10 12	30	F	10 29	10 46	30	𝔖	10 35	10 54	30	W	11 32	11 51
31	𝔖	10 26	10 49					31	W	10 29	10 46					31	M	11 13	11 31				

Garston tides 7 minutes later than Liverpool each day.

DAILY TIDE TABLES AT LIVERPOOL FOR THE YEAR 1897—*continued.*

JULY.				AUGUST.				SEPTEMBER.			
		LIVERPOOL High Water.				**LIVERPOOL** High Water.				**LIVERPOOL** High Water.	
Date.	Day.	Morn.	Aftern.	Date.	Day.	Morn.	Aftern.	Date.	Day.	Morn.	Aftern.
		h m	h m			h m	h m			h m	h m
1	Th	..	0 11	1	𝔖	0 48	1 7	1	W	1 37	1 56
2	F	0 31	0 50	2	M	1 25	1 44	2	Th	2 16	2 37
3	S	1 9	1 27	3	Tu	2 2	2 20	3	F	2 59	3 22
4	𝔖	1 46	2 5	4	W	2 39	2 59	4	S	3 49	4 22
5	M	2 25	2 45	5	Th	3 21	3 44	5	𝔖	5 1	5 49
6	Tu	3 6	3 28	6	F	4 10	4 41	6	M	6 44	7 34
7	W	3 51	4 16	7	S	5 15	5 56	7	Tu	8 16	8 52
8	Th	4 44	5 14	8	𝔖	6 46	7 32	8	W	9 22	9 47
9	F	5 48	6 25	9	M	8 15	8 54	9	Th	10 9	10 29
10	S	7 3	7 41	10	Tu	9 28	9 56	10	F	10 48	11 7
11	𝔖	8 18	8 53	11	W	10 21	10 45	11	S	11 25	11 43
12	M	9 25	9 55	12	Th	11 8	11 30	12	𝔖	..	0 0
13	Tu	10 23	10 50	13	F	11 50	..	13	M	0 17	0 34
14	W	11 16	11 42	14	S	0 10	0 29	14	Tu	0 50	1 5
15	Th	..	0 7	15	𝔖	0 48	1 6	15	W	1 19	1 34
16	F	0 30	0 52	16	M	1 23	1 39	16	Th	1 49	2 4
17	S	1 14	1 34	17	Tu	1 54	2 10	17	F	2 20	2 38
18	𝔖	1 54	2 13	18	W	2 26	2 42	18	S	2 57	3 18
19	M	2 31	2 49	19	Th	2 58	3 16	19	𝔖	3 43	4 16
20	Tu	3 7	3 25	20	F	3 35	3 58	20	M	4 55	5 42
21	W	3 43	4 3	21	S	4 26	5 0	21	Tu	6 32	7 20
22	Th	4 25	4 50	22	𝔖	5 40	6 27	22	W	7 59	8 32
23	F	5 21	5 56	23	M	7 13	7 56	23	Th	8 59	9 22
24	S	6 38	7 19	24	Tu	8 36	9 8	24	F	9 42	10 1
25	𝔖	7 57	8 33	25	W	9 34	9 55	25	S	10 19	10 38
26	M	9 4	9 31	26	Th	10 14	10 32	26	𝔖	10 56	11 14
27	Tu	9 55	10 17	27	F	10 51	11 9	27	M	11 33	11 53
28	W	10 37	10 57	28	S	11 26	11 44	28	Tu	..	0 13
29	Th	11 16	11 35	29	𝔖	..	0 3	29	W	0 33	0 54
30	F	11 54	..	30	M	0 22	0 41	30	Th	1 15	1 36
31	S	0 12	0 30	31	Tu	1 0	1 19				

OCTOBER.				NOVEMBER.				DECEMBER.			
		LIVERPOOL High Water.				**LIVERPOOL** High Water.				**LIVERPOOL** High Water.	
Date.	Day.	Morn.	Aftern.	Date.	Day.	Morn.	Aftern.	Date.	Day.	Morn.	Aftern.
		h m	h m			h m	h m			h m	h m
1	F	1 57	2 19	1	M	3 37	4 11	1	W	4 20	4 52
2	S	2 43	3 10	2	Tu	4 50	5 33	2	Th	5 26	6 1
3	𝔖	3 40	4 17	3	W	6 18	6 57	3	F	6 38	7 11
4	M	5 1	5 52	4	Th	7 31	8 2	4	S	7 42	8 11
5	Tu	6 43	7 26	5	F	8 30	8 55	5	𝔖	8 38	9 3
6	W	8 5	8 36	6	S	9 17	9 36	6	M	9 25	9 46
7	Th	9 2	9 25	7	𝔖	9 54	10 12	7	Tu	10 6	10 25
8	F	9 46	10 4	8	M	10 29	10 47	8	W	10 44	11 2
9	S	10 22	10 40	9	Tu	11 4	11 21	9	Th	11 19	11 37
10	𝔖	10 58	11 15	10	W	11 39	11 56	10	F	11 56	..
11	M	11 31	11 47	11	Th	..	0 12	11	S	0 15	0 33
12	Tu	..	0 3	12	F	0 29	0 45	12	𝔖	0 51	1 9
13	W	0 19	0 35	13	S	1 2	1 18	13	M	1 26	1 43
14	Th	0 50	1 5	14	𝔖	1 35	1 53	14	Tu	2 1	2 20
15	F	1 21	1 37	15	M	2 13	2 33	15	W	2 40	3 1
16	S	1 54	2 11	16	Tu	2 54	3 20	16	Th	3 23	3 46
17	𝔖	2 30	2 52	17	W	3 49	4 21	17	F	4 12	4 41
18	M	3 16	3 46	18	Th	4 56	5 33	18	S	5 12	5 46
19	Tu	4 20	5 1	19	F	6 12	6 49	19	𝔖	6 24	7 0
20	W	5 47	6 32	20	S	7 20	7 50	20	M	7 34	8 5
21	Th	7 13	7 47	21	𝔖	8 18	8 44	21	Tu	8 37	9 7
22	F	8 15	8 40	22	M	9 8	9 31	22	W	9 35	10 2
23	S	9 3	9 24	23	Tu	9 54	10 18	23	Th	10 30	10 58
24	𝔖	9 43	10 2	24	W	10 42	11 7	24	F	11 25	11 52
25	M	10 22	10 43	25	Th	11 33	..	25	S	..	0 19
26	Tu	11 4	11 26	26	F	0 0	0 26	26	𝔖	0 44	1 8
27	W	11 49	..	27	S	0 51	1 17	27	M	1 32	1 55
28	Th	0 12	0 35	28	𝔖	1 42	2 7	28	Tu	2 17	2 39
29	F	0 59	1 22	29	M	2 32	2 57	29	W	3 0	3 21
30	S	1 46	2 11	30	Tu	3 23	3 51	30	Th	3 42	4 4
31	𝔖	2 37	3 6					31	F	4 28	4 54

Garston tides 7 minutes later than Liverpool each day.

DAILY TIDE TABLES AT GOOLE FOR THE YEAR 1897.

JANUARY.			
Date.	Day.	GOOLE High Water.	
		Morn.	Aftern.
		h m	h m
1	F	5 12	5 44
2	S	6 12	6 39
3	𝔖	7 6	7 33
4	M	7 58	8 22
5	Tu	8 45	9 6
6	W	9 26	9 47
7	Th	10 6	10 25
8	F	10 43	11 1
9	S	11 19	11 38
10	𝔖	11 59	..
11	M	0 23	0 48
12	Tu	1 15	1 43
13	W	2 13	2 45
14	Th	3 18	3 53
15	F	4 29	5 4
16	S	5 35	6 1
17	𝔖	6 24	6 45
18	M	7 6	7 28
19	Tu	7 48	8 7
20	W	8 27	8 47
21	Th	9 6	9 25
22	F	9 44	10 3
23	S	10 23	10 44
24	𝔖	11 4	11 24
25	M	11 46	..
26	Tu	0 11	0 41
27	W	1 15	1 51
28	Th	2 28	3 7
29	F	3 47	4 28
30	S	5 8	5 45
31	𝔖	6 16	6 41

FEBRUARY.			
Date.	Day.	GOOLE High Water.	
		Morn.	Aftern.
		h m	h m
1	M	7 4	7 27
2	Tu	7 49	8 10
3	W	8 30	8 48
4	Th	9 6	9 24
5	F	9 40	9 55
6	S	10 11	10 27
7	𝔖	10 42	10 57
8	M	11 12	11 29
9	Tu	11 48	..
10	W	0 11	0 38
11	Th	1 7	1 40
12	F	2 17	2 58
13	S	3 40	4 21
14	𝔖	5 1	5 36
15	M	6 4	6 27
16	Tu	6 48	7 7
17	W	7 27	7 47
18	Th	8 6	8 25
19	F	8 44	9 3
20	S	9 21	9 40
21	𝔖	9 59	10 19
22	M	10 40	11 1
23	Tu	11 22	11 44
24	W	..	0 13
25	Th	0 47	1 28
26	F	2 11	2 55
27	S	3 41	4 26
28	𝔖	5 7	5 43

MARCH.			
Date.	Day.	GOOLE High Water.	
		Morn.	Aftern.
		h m	h m
1	M	6 10	6 32
2	Tu	6 52	7 12
3	W	7 32	7 50
4	Th	8 6	8 22
5	F	8 38	8 54
6	S	9 9	9 22
7	𝔖	9 36	9 51
8	M	10 6	10 21
9	Tu	10 36	10 52
10	W	11 9	11 27
11	Th	11 50	..
12	F	0 20	0 54
13	S	1 34	2 16
14	𝔖	3 2	3 46
15	M	4 27	5 3
16	Tu	5 34	5 58
17	W	6 18	6 36
18	Th	6 55	7 15
19	F	7 34	7 54
20	S	8 14	8 35
21	𝔖	8 56	9 15
22	M	9 36	9 57
23	Tu	10 19	10 41
24	W	11 4	11 29
25	Th	..	0 1
26	F	0 38	1 21
27	S	2 5	2 48
28	𝔖	3 32	4 13
29	M	4 50	5 22
30	Tu	5 46	6 7
31	W	6 27	6 44

APRIL.			
Date.	Day.	GOOLE High Water.	
		Morn.	Aftern.
		h m	h m
1	Th	7 2	7 19
2	F	7 35	7 50
3	S	8 6	8 22
4	𝔖	8 38	8 53
5	M	9 7	9 22
6	Tu	9 37	9 52
7	W	10 8	10 25
8	Th	10 42	11 2
9	F	11 25	11 54
10	S	..	0 30
11	𝔖	1 8	1 49
12	M	2 31	3 10
13	Tu	3 45	4 19
14	W	4 49	5 16
15	Th	5 38	5 59
16	F	6 18	6 38
17	S	7 0	7 22
18	𝔖	7 45	8 8
19	M	8 31	8 54
20	Tu	9 16	9 40
21	W	10 4	10 29
22	Th	10 55	11 23
23	F	11 56	..
24	S	0 33	1 12
25	𝔖	1 53	2 32
26	M	3 9	3 41
27	Tu	4 13	4 43
28	W	5 10	5 32
29	Th	5 52	6 10
30	F	6 27	6 45

MAY.			
Date.	Day.	GOOLE High Water.	
		Morn.	Aftern.
		h m	h m
1	S	7 2	7 19
2	𝔖	7 35	7 52
3	M	8 9	8 25
4	Tu	8 42	8 58
5	W	9 15	9 32
6	Th	9 49	10 8
7	F	10 28	10 48
8	S	11 11	11 38
9	𝔖	..	0 9
10	M	0 45	1 22
11	Tu	1 58	2 32
12	W	3 3	3 33
13	Th	4 2	4 30
14	F	4 57	5 21
15	S	5 44	6 7
16	𝔖	6 31	6 56
17	M	7 22	7 48
18	Tu	8 13	8 39
19	W	9 5	9 30
20	Th	9 56	10 22
21	F	10 48	11 15
22	S	11 43	..
23	𝔖	0 15	0 50
24	M	1 25	1 57
25	Tu	2 28	2 57
26	W	3 25	3 52
27	Th	4 19	4 45
28	F	5 10	5 32
29	S	5 53	6 13
30	𝔖	6 32	6 51
31	M	7 10	7 29

JUNE.			
Date.	Day.	GOOLE High Water.	
		Morn.	Aftern.
		h m	h m
1	Tu	7 48	8 6
2	W	8 24	8 42
3	Th	8 59	9 17
4	F	9 35	9 55
5	S	10 16	10 37
6	𝔖	10 58	11 21
7	M	11 48	..
8	Tu	0 17	0 49
9	W	1 22	1 54
10	Th	2 25	2 54
11	F	3 21	3 48
12	S	4 17	4 48
13	𝔖	5 18	5 47
14	M	6 15	6 42
15	Tu	7 11	7 39
16	W	8 7	8 33
17	Th	8 57	9 21
18	F	9 46	10 10
19	S	10 34	10 57
20	𝔖	11 20	11 44
21	M	..	0 10
22	Tu	0 37	1 5
23	W	1 33	2 0
24	Th	2 28	2 56
25	F	3 24	3 52
26	S	4 22	4 52
27	𝔖	5 20	5 45
28	M	6 7	6 29
29	Tu	6 49	7 9
30	W	7 29	7 49

Hull tides 59 minutes earlier than Goole each day.

DAILY TIDE TABLES AT GOOLE FOR THE YEAR 1897—*continued.*

JULY.				AUGUST.				SEPTEMBER.				OCTOBER.				NOVEMBER.				DECEMBER.			
Date.	Day.	**GOOLE** High Water.		Date.	Day.	**GOOLE** High Water.		Date.	Day.	**GOOLE** High Water.		Date.	Day.	**GOOLE** High Water.		Date.	Day.	**GOOLE** High Water.		Date.	Day.	**GOOLE** High Water.	
		Morn.	Aftern.			Morn.	Aftern.			Morn.	Aftern.			Morn.	Aftern.			Morn.	Aftern.			Morn.	Aftern.
		h m	h m			h m	h m			h m	h m			h m	h m			h m	h m			h m	h m
1	Th	8 8	8 28	1	𝔖	9 4	9 22	1	W	9 53	10 13	1	F	10 15	10 38	1	M	..	0 5	1	W	0 20	0 53
2	F	8 47	9 6	2	M	9 41	10 0	2	Th	10 34	10 55	2	S	11 2	11 32	2	Tu	0 44	1 23	2	Th	1 25	1 56
3	S	9 25	9 43	3	Tu	10 19	10 38	3	F	11 17	11 43	3	𝔖	..	0 8	3	W	2 1	2 39	3	F	2 27	2 57
4	𝔖	10 2	10 22	4	W	10 57	11 18	4	S	..	0 16	4	M	0 50	1 35	4	Th	3 13	3 45	4	S	3 26	3 55
5	M	10 43	11 4	5	Th	11 41	..	5	𝔖	0 54	1 35	5	Tu	2 20	3 1	5	F	4 15	4 44	5	𝔖	4 24	4 52
6	Tu	11 25	11 48	6	F	0 6	0 38	6	M	2 18	3 3	6	W	3 40	4 17	6	S	5 10	5 32	6	M	5 18	5 40
7	W	..	0 15	7	S	1 14	1 49	7	Tu	3 48	4 29	7	Th	4 50	5 17	7	𝔖	5 51	6 10	7	Tu	6 1	6 21
8	Th	0 45	1 16	8	𝔖	2 25	3 6	8	W	5 7	5 37	8	F	5 40	6 1	8	M	6 27	6 45	8	W	6 41	6 59
9	F	1 48	2 18	9	M	3 46	4 28	9	Th	6 2	6 24	9	S	6 20	6 38	9	Tu	7 3	7 21	9	Th	7 18	7 36
10	S	2 49	3 21	10	Tu	5 8	5 43	10	F	6 44	7 4	10	𝔖	6 56	7 14	10	W	7 38	7 56	10	F	7 54	8 13
11	𝔖	3 55	4 30	11	W	6 11	6 35	11	S	7 24	7 42	11	M	7 31	7 48	11	Th	8 12	8 29	11	S	8 32	8 50
12	M	5 8	5 41	12	Th	6 59	7 24	12	𝔖	7 59	8 16	12	Tu	8 4	8 20	12	F	8 45	9 1	12	𝔖	9 7	9 24
13	Tu	6 10	6 38	13	F	7 46	8 7	13	M	8 33	8 50	13	W	8 35	8 51	13	S	9 18	9 35	13	M	9 42	10 0
14	W	7 6	7 33	14	S	8 27	8 46	14	Tu	9 6	9 21	14	Th	9 6	9 21	14	𝔖	9 53	10 12	14	Tu	10 19	10 38
15	Th	7 59	8 23	15	𝔖	9 4	9 21	15	W	9 35	9 50	15	F	9 37	9 54	15	M	10 31	10 53	15	W	10 58	11 21
16	F	8 46	9 8	16	M	9 38	9 55	16	Th	10 5	10 21	16	S	10 12	10 30	16	Tu	11 18	11 48	16	Th	11 46	..
17	S	9 30	9 51	17	Tu	10 11	10 28	17	F	10 38	10 57	17	𝔖	10 49	11 13	17	W	..	0 20	17	F	0 14	0 43
18	𝔖	10 11	10 31	18	W	10 44	11 0	18	S	11 18	11 43	18	M	11 43	..	18	Th	0 54	1 29	18	S	1 14	1 45
19	M	10 49	11 7	19	Th	11 17	11 37	19	𝔖	..	0 13	19	Tu	0 17	0 54	19	F	2 3	2 36	19	𝔖	2 16	2 47
20	Tu	11 25	11 45	20	F	..	0 0	20	M	0 49	1 28	20	W	1 33	2 14	20	S	3 6	3 34	20	M	3 17	3 47
21	W	..	0 7	21	S	0 27	0 59	21	Tu	2 10	2 53	21	Th	2 52	3 27	21	𝔖	4 3	4 32	21	Tu	4 18	4 51
22	Th	0 30	0 56	22	𝔖	1 34	2 10	22	W	3 35	4 15	22	F	4 1	4 29	22	M	4 59	5 23	22	W	5 22	5 50
23	F	1 22	1 54	23	M	2 49	3 29	23	Th	4 46	5 14	23	S	4 55	5 18	23	Tu	5 46	6 9	23	Th	6 17	6 45
24	S	2 25	2 59	24	Tu	4 10	4 49	24	F	5 37	5 57	24	𝔖	5 39	5 58	24	W	6 33	6 58	24	F	7 14	7 42
25	𝔖	3 35	4 11	25	W	5 22	5 49	25	S	6 16	6 34	25	M	6 17	6 38	25	Th	7 24	7 50	25	S	8 9	8 35
26	M	4 46	5 18	26	Th	6 10	6 30	26	𝔖	6 53	7 12	26	Tu	7 0	7 21	26	F	8 16	8 42	26	𝔖	9 0	9 21
27	Tu	5 46	6 10	27	F	6 48	7 6	27	M	7 30	7 49	27	W	7 43	8 5	27	S	9 7	9 33	27	M	9 48	10 12
28	W	6 32	6 52	28	S	7 25	7 43	28	Tu	8 9	8 30	28	Th	8 29	8 51	28	𝔖	9 59	10 25	28	Tu	10 35	10 57
29	Th	7 12	7 32	29	𝔖	8 1	8 19	29	W	8 49	9 10	29	F	9 14	9 38	29	M	10 50	11 16	29	W	11 19	11 42
30	F	7 51	8 10	30	M	8 39	8 57	30	Th	9 31	9 52	30	S	10 3	10 29	30	Tu	11 47	..	30	Th	..	0 6
31	S	8 28	8 46	31	Tu	9 15	9 34					31	𝔖	10 57	11 28					31	F	0 32	1 0

Hull tides 59 minutes earlier than Goole each day.

TABLE

Showing the Number of Days between any two Dates; also showing the Number of Days from any Day throughout the Year to the 31st of December, the usual period to which Interest is calculated.

January.			February.			March.			April.			May.			June.		
Jan.	Number.	Days to Dec. 31.	Feb.	Number.	Days to Dec. 31.	Mar.	Number.	Days to Dec. 31.	April	Number.	Days to Dec. 31.	May.	Number.	Days to Dec. 31.	June	Number.	Days to Dec. 31.
1	1	364	1	32	333	1	60	305	1	91	274	1	121	244	1	152	213
2	2	363	2	33	332	2	61	304	2	92	273	2	122	243	2	153	212
3	3	362	3	34	331	3	62	303	3	93	272	3	123	242	3	154	211
4	4	361	4	35	330	4	63	302	4	94	271	4	124	241	4	155	210
5	5	360	5	36	329	5	64	301	5	95	270	5	125	240	5	156	209
6	6	359	6	37	328	6	65	300	6	96	269	6	126	239	6	157	208
7	7	358	7	38	327	7	66	299	7	97	268	7	127	238	7	158	207
8	8	357	8	39	326	8	67	298	8	98	267	8	128	237	8	159	206
9	9	356	9	40	325	9	68	297	9	99	266	9	129	236	9	160	205
10	10	355	10	41	324	10	69	296	10	100	265	10	130	235	10	161	204
11	11	354	11	42	323	11	70	295	11	101	264	11	131	234	11	162	203
12	12	353	12	43	322	12	71	294	12	102	263	12	132	233	12	163	202
13	13	352	13	44	321	13	72	293	13	103	262	13	133	232	13	164	201
14	14	351	14	45	320	14	73	292	14	104	261	14	134	231	14	165	200
15	15	350	15	46	319	15	74	291	15	105	260	15	135	230	15	166	199
16	16	349	16	47	318	16	75	290	16	106	259	16	136	229	16	167	198
17	17	348	17	48	317	17	76	289	17	107	258	17	137	228	17	168	197
18	18	347	18	49	316	18	77	288	18	108	257	18	138	227	18	169	196
19	19	346	19	50	315	19	78	287	19	109	256	19	139	226	19	170	195
20	20	345	20	51	314	20	79	286	20	110	255	20	140	225	20	171	194
21	21	344	21	52	313	21	80	285	21	111	254	21	141	224	21	172	193
22	22	343	22	53	312	22	81	284	22	112	253	22	142	223	22	173	192
23	23	342	23	54	311	23	82	283	23	113	252	23	143	222	23	174	191
24	24	341	24	55	310	24	83	282	24	114	251	24	144	221	24	175	190
25	25	340	25	56	309	25	84	281	25	115	250	25	145	220	25	176	189
26	26	339	26	57	308	26	85	280	26	116	249	26	146	219	26	177	188
27	27	338	27	58	307	27	86	279	27	117	248	27	147	218	27	178	187
28	28	337	28	59	306	28	87	278	28	118	247	28	148	217	28	179	186
29	29	336				29	88	277	29	119	246	29	149	216	29	180	185
30	30	335				30	89	276	30	120	245	30	150	215	30	181	184
31	31	334				31	90	275				31	151	214			

TABLE

Showing the Number of Days between any two Dates, &c.—*continued.*

July.			August.			September.			October.			November.			December.		
July.	Number.	Days to Dec. 31.	Aug.	Number.	Days to Dec. 31.	Sept.	Number.	Days to Dec. 31.	Oct.	Number.	Days to Dec. 31.	Nov.	Number.	Days to Dec. 31.	Dec.	Number.	Days to Dec. 31.
1	182	183	1	213	152	1	244	121	1	274	91	1	305	60	1	335	30
2	183	182	2	214	151	2	245	120	2	275	90	2	306	59	2	336	29
3	184	181	3	215	150	3	246	119	3	276	89	3	307	58	3	337	28
4	185	180	4	216	149	4	247	118	4	277	88	4	308	57	4	338	27
5	186	179	5	217	148	5	248	117	5	278	87	5	309	56	5	339	26
6	187	178	6	218	147	6	249	116	6	279	86	6	310	55	6	340	25
7	188	177	7	219	146	7	250	115	7	280	85	7	311	54	7	341	24
8	189	176	8	220	145	8	251	114	8	281	84	8	312	53	8	342	23
9	190	175	9	221	144	9	252	113	9	282	83	9	313	52	9	343	22
10	191	174	10	222	143	10	253	112	10	283	82	10	314	51	10	344	21
11	192	173	11	223	142	11	254	111	11	284	81	11	315	50	11	345	20
12	193	172	12	224	141	12	255	110	12	285	80	12	316	49	12	346	19
13	194	171	13	225	140	13	256	109	13	286	79	13	317	48	13	347	18
14	195	170	14	226	139	14	257	108	14	287	78	14	318	47	14	348	17
15	196	169	15	227	138	15	258	107	15	288	77	15	319	46	15	349	16
16	197	168	16	228	137	16	259	106	16	289	76	16	320	45	16	350	15
17	198	167	17	229	136	17	260	105	17	290	75	17	321	44	17	351	14
18	199	166	18	230	135	18	261	104	18	291	74	18	322	43	18	352	13
19	200	165	19	231	134	19	262	103	19	292	73	19	323	42	19	353	12
20	201	164	20	232	133	20	263	102	20	293	72	20	324	41	20	354	11
21	202	163	21	233	132	21	264	101	21	294	71	21	325	40	21	355	10
22	203	162	22	234	131	22	265	100	22	295	70	22	326	39	22	356	9
23	204	161	23	235	130	23	266	99	23	296	69	23	327	38	23	357	8
24	205	160	24	236	129	24	267	98	24	297	68	24	328	37	24	358	7
25	206	159	25	237	128	25	268	97	25	298	67	25	329	36	25	359	6
26	207	158	26	238	127	26	269	96	26	299	66	26	330	35	26	360	5
27	208	157	27	239	126	27	270	95	27	300	65	27	331	34	27	361	4
28	209	156	28	240	125	28	271	94	28	301	64	28	332	33	28	362	3
29	210	155	29	241	124	29	272	93	29	302	63	29	333	32	29	363	2
30	211	154	30	242	123	30	273	92	30	303	62	30	334	31	30	364	1
31	212	153	31	243	122				31	304	61				31	365	

THE ENGLISH MILE COMPARED WITH OTHER EUROPEAN MEASURES.

	English Statute Mile.	English Geog. Mile.	French Kilomètre.	German Geog. Mile.	Russian Verst.
English Statute Mile ..	1·000	0·867	1·609	0·217	1·508
English Geog. Mile	1·153	1·000	1·855	0·250	1·738
Kilomètre	0·621	0·540	1·000	0·135	0·937
German Geog. Mile	4·610	4·000	7·420	1·000	6·953
Russian Verst..........	0·663	0·575	1·067	0·144	1·000
Austrian Mile	4·714	4·089	7·586	1·022	7·112
Dutch Ure	3·458	3·000	5·565	0·750	5·215
Norwegian Mile	7·021	6·091	11·299	1·523	10·589
Swedish Mile	6·644	5·764	10·692	1·441	10·019
Danish Mile	4·682	4·062	7·536	1·016	7·078
Swiss Stunde	2·987	2·592	4·808	0·648	4·505

	Austrian Mile.	Dutch Ure.	Norwegian Mile.	Swedish Mile.	Danish Mile.	Swiss Stunde.
English Statute Mile ..	0·212	0·289	0·142	0·151	0·213	0·335
English Geog. Mile	0·245	0·333	0·164	0·169	0·246	0·386
Kilomètre	0·132	0·180	0·088	0·094	0·133	0·208
German Geog. Mile	0·978	1·333	0·657	0·694	0·985	1·543
Russian Verst	0·141	0·192	0·094	0·100	0·142	0·222
Austrian Mile	1·000	1·363	0·672	0·710	1·006	1·578
Dutch Ure	0·734	1·000	0·493	0·520	0·738	1·157
Norwegian Mile	1·489	2·035	1·000	1·057	1·499	2·350
Swedish Mile	1·409	1·921	0·948	1·000	1·419	2·224
Danish Mile	0·994	1·354	0·667	0·705	1·080	1·567
Swiss Stunde	0·634	0·864	0·425	0·449	0·638	1·000

TABLE SHOWING THE NUMBER OF DAYS FROM ANY DAY OF ONE MONTH TO THE SAME DAY OF ANY OTHER MONTH.

NUMBER OF DAYS FROM DAY TO DAY.

FROM TO	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
JANUARY ..	365	31	59	90	120	151	181	212	243	273	304	334
FEBRUARY..	334	365	28	59	89	120	150	181	212	242	273	303
MARCH....	306	337	365	31	61	92	122	153	184	214	245	275
APRIL.....	275	306	334	365	30	61	91	122	153	183	214	244
MAY	245	276	304	335	365	31	61	92	123	153	184	214
JUNE......	214	245	273	304	334	365	30	61	92	122	153	183
JULY......	184	215	243	274	304	335	365	31	62	92	123	153
AUGUST ...	153	184	212	243	273	304	334	365	31	61	92	122
SEPTEMBER	122	153	181	212	242	273	303	334	365	30	61	91
OCTOBER ..	92	123	151	182	212	243	273	304	335	365	31	61
NOVEMBER.	61	92	120	151	181	212	242	273	304	334	365	30
DECEMBER.	31	62	90	121	151	182	212	243	274	304	335	365

Example of Use of Table:—To find the number of days *from* 16th August to 27th February. Find August in the side column and February at the top; the number at the intersection, viz., 184, is the number of days from 16th August to 16th February; and 11 (the difference between 16 and 27), and the sum 195 is the number required. Similarly, the number from 16th August to 5th February is 184 less 11, or 173.

RETURN SHOWING THE AVERAGE RETAIL PRICE PER POUND, AVOIRDUPOIS, OF THE ARTICLES OF DOMESTIC CONSUMPTION, MEDIUM QUALITIES, MENTIONED BELOW, IN SOME OF THE PRINCIPAL CITIES OF EUROPE, DURING THE YEAR 1892. *(From Official Sources.)*

ARTICLE.	Paris.	Lille.	Berlin.	Frankfort-on-Main.	Hamburg.	Vienna.	Buda-Pesth.	Prague.	Rome.	* Florence.	Brussels.
BEEF:—											
Prime	1s. to 1s. 4d.	1s. 5⅜d.	10¾d.	9d.	11¼d.	8d.	8½d.	7d.	8½d.	9d.	10⅞d.
Medium	7½d. to 10d.	11⅜d.	8½d.	8d.	9½d.	6¼d.	6½d.	6½d.	6d.	7d.	8¾d.
Inferior	..	7⅞d.	6d.	7d.	7½d.	Av. 7d.	4d.	6d.	..	5d.	6⅛d.
FLOUR:—											
First quality	2d. to 2½d.	2¼d.	1¾d.	2½d.	2d.	2d.	1⅒d.	2¼d.	2d.	2½d.	1⅜d.
Second quality	..	..	..	..	..	1¾d.	..	..	..	2⅕d.	..
WHEAT-BREAD:—											
White Household	2d. to 2¼d.	1¾d.	2¼d.	2d.	3d.	1¾d.	1⅒d.	1½d.	2d.	2d.	1½d.
Second quality	..	..	..	..	..	..	..	..	..	1⅕d.	..
Third quality	..	..	..	..	..	..	..	..	..	1⅗d.	..
POTATOES:—											
For human consumption	¼d. to ½d.	$\frac{7}{16}$d.	¼d. to ½d.	½d.	1d.	½d.	¼d.	¼d.	¾d.	½d.	⅝d.
RICE:—											
For human consumption, without husk	2d. to 2¼d.	3⅞d.	3¼d. to 3½d.	2d. to 5d.	3d.	3d.	..	2¾d.	2½d.	2⅕d. to 3d.	1¾d.
SUGAR:—											
Good white lump, cracked or sawed	6½d.	5¼d.	4¼d. to 4½d.	4d. to 4½d.	4¾d.	3¾d. to 4d.	4d.	3¾d.	7½d.	†6½d. to 7½d.	4⅝d.
COFFEE:—											
Brazil or plantation, roasted and ground, without chicory or other coffee substitute	2s. 6d. fresh roasted	2s. 0⅜d.	1s. 4¾d.	1s. 6d.	1s. 5d.	1s. 8½d.	1s. 5½d. (raw)	1s. 8¾d.	1s. 11d.	1s. 10d. to 2s. 3⅓d.	‡1s. 2⅜d.

* N.B.—The rate of exchange has been taken at twenty-six lire per £, as being the approximate average for the whole year (1892).

† Imported in the rough, and refined in Italy; the greater portion is stated to be "beet-root."

‡ The coffee is chiefly imported from the Dutch Colonies Brazil coffee is little or not used. The above price refers to coffee *in the bean*, ground coffee is not generally sold in Brussels.

TERMS AND ABBREVIATIONS COMMONLY USED IN BUSINESS.

A/c	Account.
C	Currency.
$	A dollar.
E. E.	Errors excepted.
E. & O. E.	Errors and omissions excepted.
F. O. B.	Free on board (delivered on deck without expense to the ship).
F. P. A.	Free of particular average.
Inst	Present month.
Prox.	Next month.
Ult	Last month.
D/D	Days after date.
M/D	Months after date.
D/S	Days after sight.
%	Per cent.
@ ⅌ ℔	At per pound.
B/L	Bill of lading.
Ad valorem	According to value.
Affidavit	Statement on oath.
Affirmation	Statement without an oath.
Agio	The premium borne by a better sort of money above an inferior.
Assets	A term for property in contradistinction to liabilities.
Banco	A continental term for bank money at Hamburg and other places.

Dead Freight.—The damage payable by one who engages to load a ship fully, and fails to do so.

Deviation, in marine insurance, is that divergence from the voyage insured which releases the underwriter from his risk.

Discount.—An allowance made for payment of money before due.

Policy.—The document containing the contract of insurance. A *Valued Policy* is when the interest insured is valued. An *Open Policy* is one in which the amount is left for subsequent proof. In an open policy where the value shipped does not equal the value insured, the difference is termed *over insurance;* and the proportionable amount of premium returnable to the insurer is called a *return for short interest.*

Primage.—A small allowance for the shipmaster's care of goods, now generally included in the freight.

Pro rata.—Payment in proportion to the various interests concerned.

Quid pro quo.—Giving one thing for another.

Respondentia.—A contract of loan by which goods in a ship are hypothecated to the lender, as in bottomry.

Ullage.—The quantity a cask wants of being full.

A CALENDAR

For Ascertaining Any Day of the Week for any Given Time within the Present Century.

YEARS 1801 TO 1900.											31 Jan.	28 Feb.	31 Mar.	30 April	31 May	30 June	31 July.	31 Aug.	30 Sept.	31 Oct.	30 Nov.	31 Dec.
1801	1807	1818	1829	1835	1846	1857	1863	1874	1885	1891	4	7	7	3	5	1	3	6	2	4	7	2
1802	1813	1819	1830	1841	1847	1858	1869	1875	1886	1897	5	1	1	4	6	2	4	7	3	5	1	3
1803	1814	1825	1831	1842	1853	1859	1870	1881	1887	1898	6	2	2	5	7	3	5	1	4	6	2	4
1805	1811	1822	1833	1839	1850	1861	1867	1878	1889	1895	2	5	5	1	3	6	1	4	7	2	5	7
1806	1817	1823	1834	1845	1851	1862	1873	1879	1890	..	3	6	6	2	4	7	2	5	1	3	6	1
1809	1815	1826	1837	1843	1854	1865	1871	1882	1893	1899	7	3	3	6	1	4	6	2	5	7	3	5
1810	1821	1827	1838	1849	1855	1866	1877	1883	1894	1900	1	4	4	7	2	5	7	3	6	1	4	6
LEAP YEARS.											..	29	..	..	..	..	..	..	..	..	..	..
1804	1832	1860	1888								7	3	4	7	2	5	7	3	6	1	4	6
1808	1836	1864	1892								5	1	2	5	7	3	5	1	4	6	2	4
1812	1840	1868	1896								3	6	7	3	5	1	3	6	2	4	7	2
1816	1844	1872	..								1	4	5	1	3	6	1	4	7	2	5	7
1820	1848	1876	..								6	2	3	6	1	4	6	2	5	7	3	5
1824	1852	1880	..								4	7	1	4	6	2	4	7	3	5	1	3
1828	1856	1884	..								2	5	6	2	4	7	2	5	1	3	6	1

Note.—To ascertain any day of the week in any year of the present century, first look in the table of years for the year required, and under the months are figures which refer to the corresponding figures at the head of the columns of days below. *For example:* To know what day of the week May 4th was on in the year 1876, in the table of years look for 1876, and in a parallel line, under May, is figure 1, which directs to column 1, in which it will be seen that May 4 fell on Thursday.

1	2	3	4	5	6	7
Monday 1	Tuesday 1	Wednes. 1	Thursday 1	Friday 1	Saturday 1	SUNDAY 1
Tuesday 2	Wednes. 2	Thursday 2	Friday 2	Saturday 2	SUNDAY 2	Monday 2
Wednes. 3	Thursday 3	Friday 3	Saturday 3	SUNDAY 3	Monday 3	Tuesday 3
Thursday 4	Friday 4	Saturday 4	SUNDAY 4	Monday 4	Tuesday 4	Wednes. 4
Friday 5	Saturday 5	SUNDAY 5	Monday 5	Tuesday 5	Wednes. 5	Thursday 5
Saturday 6	SUNDAY 6	Monday 6	Tuesday 6	Wednes. 6	Thursday 6	Friday 6
SUNDAY 7	Monday 7	Tuesday 7	Wednes. 7	Thursday 7	Friday 7	Saturday 7
Monday 8	Tuesday 8	Wednes. 8	Thursday 8	Friday 8	Saturday 8	SUNDAY 8
Tuesday 9	Wednes. 9	Thursday 9	Friday 9	Saturday 9	SUNDAY 9	Monday 9
Wednes. 10	Thursday 10	Friday 10	Saturday 10	SUNDAY 10	Monday 10	Tuesday 10
Thursday 11	Friday 11	Saturday 11	SUNDAY 11	Monday 11	Tuesday 11	Wednes. 11
Friday 12	Saturday 12	SUNDAY 12	Monday 12	Tuesday 12	Wednes. 12	Thursday 12
Saturday 13	SUNDAY 13	Monday 13	Tuesday 13	Wednes. 13	Thursday 13	Friday 13
SUNDAY 14	Monday 14	Tuesday 14	Wednes. 14	Thursday 14	Friday 14	Saturday 14
Monday 15	Tuesday 15	Wednes. 15	Thursday 15	Friday 15	Saturday 15	SUNDAY 15
Tuesday 16	Wednes. 16	Thursday 16	Friday 16	Saturday 16	SUNDAY 16	Monday 16
Wednes. 17	Thursday 17	Friday 17	Saturday 17	SUNDAY 17	Monday 17	Tuesday 17
Thursday 18	Friday 18	Saturday 18	SUNDAY 18	Monday 18	Tuesday 18	Wednes. 18
Friday 19	Saturday 19	SUNDAY 19	Monday 19	Tuesday 19	Wednes. 19	Thursday 19
Saturday 20	SUNDAY 20	Monday 20	Tuesday 20	Wednes. 20	Thursday 20	Friday 20
SUNDAY 21	Monday 21	Tuesday 21	Wednes. 21	Thursday 21	Friday 21	Saturday 21
Monday 22	Tuesday 22	Wednes. 22	Thursday 22	Friday 22	Saturday 22	SUNDAY 22
Tuesday 23	Wednes. 23	Thursday 23	Friday 23	Saturday 23	SUNDAY 23	Monday 23
Wednes. 24	Thursday 24	Friday 24	Saturday 24	SUNDAY 24	Monday 24	Tuesday 24
Thursday 25	Friday 25	Saturday 25	SUNDAY 25	Monday 25	Tuesday 25	Wednes. 25
Friday 26	Saturday 26	SUNDAY 26	Monday 26	Tuesday 26	Wednes. 26	Thursday 26
Saturday 27	SUNDAY 27	Monday 27	Tuesday 27	Wednes. 27	Thursday 27	Friday 27
SUNDAY 28	Monday 28	Tuesday 28	Wednes. 28	Thursday 28	Friday 28	Saturday 28
Monday 29	Tuesday 29	Wednes. 29	Thursday 29	Friday 29	Saturday 29	SUNDAY 29
Tuesday 30	Wednes. 30	Thursday 30	Friday 30	Saturday 30	SUNDAY 30	Monday 30
Wednes. 31	Thursday 31	Friday 31	Saturday 31	SUNDAY 31	Monday 31	Tuesday 31

WEIGHTS AND MEASURES.

TROY WEIGHT.

		Pennywts.	Grains.	*gr.*
	Ounces.	1 =	24	*dwt.*
Pound.	1 =	20 =	480	oz.
1 =	12 =	240 =	5760	lb.

A carat =4 grains. 100 Troy ounces = $190\frac{5}{7}$ Ounces Avoirdupois.

AVOIRDUPOIS WEIGHT.

							dr.Ty.gr.
						oz.	$1=27\frac{11}{34}$
					lb.	1=	$16=437\frac{1}{2}$
				st.	1=	16=	256=7000
		qr.	1=	14=	224=	3584	
	cwt.	1=	2=	28=	448=	7168	
Ton.	1=	4=	8=	112=	1792=	28672	
1	=20	=80	=160	=2240	=35840	=573440	
Ton.	*ewt.*	*qr.*	*st.*	*lb.*	*oz.*	*dr.*	*gr.*

A Cental=100 pounds. 100 Ounces Avoirdupois=$91\frac{7}{48}$ Ounces Troy.

The Apothecaries' Weight is now the same as the Avoirdupois.

LINEAL MEASURE, OR MEASURE OF LENGTH.

					ft.	in.
				yds.	1 =	12
			pl.	1 =	3 =	36
		ch.	1 =	$5\frac{1}{2}$=	$16\frac{1}{2}$=	198
	fur.	1 =	4 =	22 =	66 =	792
Mile.	1 =	10 =	40 =	220 =	660 =	7920
1	= 8 =	80 =	320 =	1760 =	5280 =	63360

A league=3 miles. A hand=4 inches. A fathom=6 feet.

Geographical degree=60 geographical or nautical miles=69·121 imperial miles.

Geographical mile = 1·150 imperial miles. A military pace=$2\frac{1}{2}$ feet.

SOLID OR CUBIC MEASURE.

	Cubic feet.	Cubic inches.
Cubic yard.	1 =	1728
1 =	27 =	46656

1 Ton of Shipping=40 cubic feet.
1 Barrel Bulk = 5 cubic feet.

LIQUID MEASURE OF CAPACITY.

		Pints.	Gills.
	Quarts.	1 —	4
Gallon.	1 =	2 =	8
1 =	4 =	8 =	32

A hogshead (hhd.) contains 63 gallons. A pipe is 2 hogsheads, and 2 pipes form a tun. All liquids are measured by this table.

GRAIN MEASURE, &c., OR DRY MEASURE OF CAPACITY.

		Pecks.	Gallons.
	Bushels.	1 =	2
Quarter.	1 =	4 =	8
1 =	8 =	32 =	64

1 Boll of Wheat=4 bushels nearly.
1 Boll of Barley=6 " "
5 Bushels are a sack.
5 Quarters make a load.

SQUARE OR LAND MEASURE.

			Sq. feet.	Sq. in.
		Sq. yards.	1 =	144
	Sq. poles.	1 =	9 =	1296
Sq. roods.	1 =	$30\frac{1}{4}$=	$272\frac{1}{4}$=	39204
Sq. acre. 1 =	40 —	1210 =	10890 =	1568160
1 = 4 =	160 =	4840 =	43560 =	6272640

1 square mile=640 acres: 36 square yards=1 rood of building: 100 sq. feet=1 square of flooring: $272\frac{1}{4}$ sq. feet=1 rood of bricklayer's work. The chain with which land is measured is 22 yards long, and 1 sq. chain=10,000 sq. links, contains 22 × 22=484 sq. yards: 10 sq. chains=1 acre.

TABLE OF TIME.

			Minutes.	Seconds.
		Hours.	1 =	60
	Days.	1 =	60 =	3600
Week.	1 =	24 =	1440 =	86400
1 =	7 =	168 =	10080 =	604800

1 Common Year=365 days, or 52 weeks 1 day.
1 Leap Year =366 days, or 52 weeks 2 days.
1 Solar Year =365 days 5 hours 48 minutes 49 seconds.

GEOGRAPHICAL OR NAUTICAL MEASURE.

1 Geographical mile= { $1\frac{3}{20}$ imperial mile of 6,076 feet.
3 " miles= 1 league.
60 " miles= { 1 degree, marked *deg.* or [°]
360 Geog. degs. or about 24,855½ imp. miles = { Circumference of the earth.

BREAD WEIGHT.

	lb.	oz.
A Peck Loaf weighs	17	$6\frac{1}{2}$
A Half Peck Loaf	8	11
A Quartern Loaf....................	4	5
A Peck or Stone of Flour	14	0
A Bushel of Flour	56	6
A Sack of Flour, or 5 Bushels	280	0

USEFUL WEIGHTS.

The following Table will be found useful when it is desired to ascertain the weight of a letter or other article, and suitable weights are not at hand. The weight given is that of coins fairly worn; allowance must be made if those used be new or very old.

$\frac{1}{4}$ oz.....Halfpenny and threepenny piece.
$\frac{1}{3}$ " ....One penny piece.
$\frac{1}{2}$ " ....Florin and sixpence.
1 " ....Three pennies.
2 " ....4 half-crowns and one shilling.
4 " ....4 florins, 4 half-crowns, $2\frac{1}{2}$ pennies.

BOOKS.

	Pages.		Leaves.		Sheet.
Folio Books..........	4	or	2	make	1
Quarto, or 4to.........	8	"	4	"	1
Octavo, or 8vo.	16	"	8	"	1
Duodecimo, or 12mo...	24	"	12	"	1
Octodecimo, or 18mo...	36	"	18	"	1

24mo., 32mo., 48mo., 72mo., &c., &c.

A READY RECKONER.

No.	¼d.	½d.	¾d.	1d.	2d.	3d.	4d.	5d.	6d.	7d.	8d.	9d.	10d.	11d.	No.
1	0 0¼	0 0½	0 0¾	0 1	0 2	0 3	0 4	0 5	0 6	0 7	0 8	0 9	0 10	0 11	1
2	0 0½	0 1	0 1½	0 2	0 4	0 6	0 8	0 10	1 0	1 2	1 4	1 6	1 8	1 10	2
3	0 0¾	0 1½	0 2¼	0 3	0 6	0 9	1 0	1 3	1 6	1 9	2 0	2 3	2 6	2 9	3
4	0 1	0 2	0 3	0 4	0 8	1 0	1 4	1 8	2 0	2 4	2 8	3 0	3 4	3 8	4
5	0 1¼	0 2½	0 3¾	0 5	0 10	1 3	1 8	2 1	2 6	2 11	3 4	3 9	4 2	4 7	5
6	0 1½	0 3	0 4½	0 6	1 0	1 6	2 0	2 6	3 0	3 6	4 0	4 6	5 0	5 6	6
7	0 1¾	0 3½	0 5¼	0 7	1 2	1 9	2 4	2 11	3 6	4 1	4 8	5 3	5 10	6 5	7
8	0 2	0 4	0 6	0 8	1 4	2 0	2 8	3 4	4 0	4 8	5 4	6 0	6 8	7 4	8
9	0 2¼	0 4½	0 6¾	0 9	1 6	2 3	3 0	3 9	4 6	5 3	6 0	6 9	7 6	8 3	9
10	0 2½	0 5	0 7½	0 10	1 8	2 6	3 4	4 2	5 0	5 10	6 8	7 6	8 4	9 2	10
11	0 2¾	0 5½	0 8¼	0 11	1 10	2 9	3 8	4 7	5 6	6 5	7 4	8 3	9 2	10 1	11
12	0 3	0 6	0 9	1 0	2 0	3 0	4 0	5 0	6 0	7 0	8 0	9 0	10 0	11 0	12
13	0 3¼	0 6½	0 9¾	1 1	2 2	3 3	4 4	5 5	6 6	7 7	8 8	9 9	10 10	11 11	13
14	0 3½	0 7	0 10½	1 2	2 4	3 6	4 8	5 10	7 0	8 2	9 4	10 6	11 8	12 10	14
15	0 3¾	0 7½	0 11¼	1 3	2 6	3 9	5 0	6 3	7 6	8 9	10 0	11 3	12 6	13 9	15
16	0 4	0 8	1 0	1 4	2 8	4 0	5 4	6 8	8 0	9 4	10 8	12 0	13 4	14 8	16
17	0 4¼	0 8½	1 0¾	1 5	2 10	4 3	5 8	7 1	8 6	9 11	11 4	12 9	14 2	15 7	17
18	0 4½	0 9	1 1½	1 6	3 0	4 6	6 0	7 6	9 0	10 6	12 0	13 6	15 0	16 6	18
19	0 4¾	0 9½	1 2¼	1 7	3 2	4 9	6 4	7 11	9 6	11 1	12 8	14 3	15 10	17 5	19
20	0 5	0 10	1 3	1 8	3 4	5 0	6 8	8 4	10 0	11 8	13 4	15 0	16 8	18 4	20
21	0 5¼	0 10½	1 3¾	1 9	3 6	5 3	7 0	8 9	10 6	12 3	14 0	15 9	17 6	19 3	21
22	0 5½	0 11	1 4½	1 10	3 8	5 6	7 4	9 2	11 0	12 10	14 8	16 6	18 4	20 2	22
23	0 5¾	0 11½	1 5¼	1 11	3 10	5 9	7 8	9 7	11 6	13 5	15 4	17 3	19 2	21 1	23
24	0 6	1 0	1 6	2 0	4 0	6 0	8 0	10 0	12 0	14 0	16 0	18 0	20 0	22 0	24
25	0 6¼	1 0½	1 6¾	2 1	4 2	6 3	8 4	10 5	12 6	14 7	16 8	18 9	20 10	22 11	25
26	0 6½	1 1	1 7½	2 2	4 4	6 6	8 8	10 10	13 0	15 2	17 4	19 6	21 8	23 10	26
27	0 6¾	1 1½	1 8¼	2 3	4 6	6 9	9 0	11 3	13 6	15 9	18 0	20 3	22 6	24 9	27
28	0 7	1 2	1 9	2 4	4 8	7 0	9 4	11 8	14 0	16 4	18 8	21 0	23 4	25 8	28
29	0 7¼	1 2½	1 9¾	2 5	4 10	7 3	9 8	12 1	14 6	16 11	19 4	21 9	24 2	26 7	29
30	0 7½	1 3	1 10½	2 6	5 0	7 6	10 0	12 6	15 0	17 6	20 0	22 6	25 0	27 6	30
33	0 8¼	1 4½	2 0¾	2 9	5 6	8 3	11 0	13 9	16 6	19 3	22 0	24 9	27 6	30 3	33
36	0 9	1 6	2 3	3 0	6 0	9 0	12 0	15 0	18 0	21 0	24 0	27 0	30 0	33 0	36
40	0 10	1 8	2 6	3 4	6 8	10 0	13 4	16 8	20 0	23 4	26 8	30 0	33 4	36 8	40
42	0 10½	1 9	2 7½	3 6	7 0	10 6	14 0	17 6	21 0	24 6	28 0	31 6	35 0	38 6	42
45	0 11¼	1 10½	2 9¾	3 9	7 6	11 3	15 0	18 9	22 6	26 3	30 0	33 9	37 6	41 3	45
48	1 0	2 0	3 0	4 0	8 0	12 0	16 0	20 0	24 0	28 0	32 0	36 0	40 0	44 0	48
50	1 0½	2 1	3 1½	4 2	8 4	12 6	16 8	20 10	25 0	29 2	33 4	37 6	41 8	45 10	50
51	1 0¾	2 1½	3 2¼	4 3	8 6	12 9	17 0	21 3	25 6	29 9	34 0	38 3	42 6	46 9	51
52	1 1	2 2	3 3	4 4	8 8	13 0	17 4	21 8	26 0	30 4	34 8	39 0	43 4	47 8	52
53	1 1¼	2 2½	3 3¾	4 5	8 10	13 3	17 8	22 1	26 6	30 11	35 4	39 9	44 2	48 7	53
54	1 1½	2 3	3 4½	4 6	9 0	13 6	18 0	22 6	27 0	31 6	36 0	40 6	45 0	49 6	54
56	1 2	2 4	3 6	4 8	9 4	14 0	18 8	23 4	28 0	32 8	37 4	42 0	46 8	51 4	56
60	1 3	2 6	3 9	5 0	10 0	15 0	20 0	25 0	30 0	35 0	40 0	45 0	50 0	55 0	60

WAGES TABLE.

Per Year.	Per Month	Per Week.	Per Day.	Per Year.	Per Month.	Per Week	Per Day.	Per Year.	Per Month.	Per Week.	Per Day.
£ s.	s. d.	s. d.	s. d.	£ s.	£ s. d.	s. d.	s. d.	£ s.	£ s. d.	£ s. d.	£ s. d.
0 10	0 10	0 2¼	0 0¼	8 0	0 13 4	3 1	0 5¼	18 0	1 10 0	0 6 11	0 0 11¾
1 0	1 8	0 4½	0 0¾	8 8	0 14 0	3 2¾	0 5½	18 18	1 11 6	0 7 3¼	0 1 0½
1 10	2 6	0 7	0 1	8 10	0 14 2	3 3¼	0 5½	19 0	1 11 8	0 7 3¾	0 1 0½
2 0	3 4	0 9¼	0 1¼	9 0	0 15 0	3 5½	0 6	20 0	1 13 4	0 7 8¼	0 1 1¼
2 2	3 6	0 9¾	0 1½	9 9	0 15 9	3 7½	0 6¼	30 0	2 10 0	0 11 6½	0 1 7¾
2 10	4 2	0 11½	0 1¾	10 0	0 16 8	3 10¼	0 6½	40 0	3 6 8	0 15 4½	0 2 2¼
3 0	5 0	1 1¾	0 2	10 10	0 17 6	4 0½	0 7	50 0	4 3 4	0 19 2¾	0 2 9
3 3	5 3	1 2½	0 2	11 0	0 18 4	4 3¾	0 7¼	60 0	5 0 0	1 3 1	0 3 3½
3 10	5 10	1 4¼	0 2¼	11 11	0 19 3	4 5¼	0 7½	70 0	5 16 8	1 6 11	0 3 10
4 0	6 8	1 6½	0 2¾	12 0	1 0 0	4 7½	0 8	80 0	6 13 4	1 10 9¼	0 4 4½
4 4	7 0	1 7½	0 2¾	12 12	1 1 0	4 10¼	0 8¼	90 0	7 10 0	1 14 7½	0 4 11¼
4 10	7 6	1 8¾	0 3	13 0	1 1 8	5 0	0 8½	100 0	8 6 8	1 18 5½	0 5 5¾
5 0	8 4	1 11	0 3¼	13 13	1 2 9	5 3	0 9	200 0	16 13 4	3 16 11	0 10 11½
5 5	8 9	2 0¼	0 3½	14 0	1 3 4	5 4½	0 9½	300 0	25 0 0	5 15 4¼	0 16 5¼
5 10	9 2	2 1½	0 3¾	14 14	1 4 6	5 7¾	0 9¾	400 0	33 6 8	7 13 10¼	1 1 11
6 0	10 0	2 3¾	0 4	15 0	1 5 0	5 9¼	0 9¾	500 0	41 13 4	9 12 3¾	1 7 4¾
6 6	10 6	2 5	0 4¼	15 15	1 6 3	6 0¾	0 10¼	600 0	50 0 0	11 10 9¼	1 12 10½
6 10	10 10	2 6	0 4¼	16 0	1 6 8	6 1¾	0 10½	700 0	58 6 8	13 9 2¾	1 18 4¼
7 0	11 8	2 8¼	0 4½	16 16	1 8 0	6 5½	0 11	800 0	66 13 4	15 7 8¼	2 3 10
7 7	12 3	2 10	0 4¾	17 0	1 8 4	6 6½	0 11¼	900 0	75 0 0	17 6 1¾	2 9 3¾
7 10	12 6	2 10½	0 5	17 17	1 9 9	6 10½	0 11¾	1000 0	83 6 8	19 4 7¼	2 14 9½

PRINCIPAL ARTICLES OF THE CALENDAR,

FOR THE YEAR 1897.

Golden Number	17	Dominical Letter	C
Epact	26	Roman Indiction	10
Solar Cycle	2		

Year 6610 of the Julian Period.
,, 1901 from the Birth of Christ.
,, 2650 ,, ,, Foundation of Rome according to Varron.
,, 7405 of the World (Constantinopolitan account).
,, 7389 ,, ,, (Alexandrian account).
,, 5658 of the Jewish Era commences on September 27th, 1897.

Ramadân (Month of Abstinence observed by the Turks) commences on February 3rd, 1897.

Year 1315 of the Mahommedan Era commences on June 2nd, 1897.

FIXED AND MOVABLE FESTIVALS, ANNIVERSARIES, ETC.

Epiphany	Jan.	6	Ascension Day	May	27
Septuagesima Sunday	Feb.	14	Pentecost—Whit Sunday	June	6
Quinquagesima Sunday	,,	28	Trinity Sunday	,,	13
Ash Wednesday	Mar.	3	Corpus Christi	,,	17
First Sunday in Lent	,,	7	Accession of Queen Vict.(1837)	,,	20
St. Patrick	,,	17	St.John Baptist—Midsummer Day	,,	24
Lady Day	,,	25	St. Michael—Michaelmas Day	Sept.	29
Palm Sunday	April	11	Prince of Wales born (1841)	Nov.	9
Good Friday	,,	16	St. Andrew	,,	30
Easter Sunday	,,	18	Christmas Day (Saturday)	Dec.	25
Queen Victoria born (1819)	May	24			

THE FOUR QUARTERS OF THE YEAR.

		H.	M.	
Spring Quarter begins	March 20th	8	16	morning.
Summer ,, ,,	June 21st	4	24	,,
Autumn ,, ,,	September 22nd	6	48	afternoon.
Winter ,, ,,	December 21st	1	12	,,

REGISTERS OF BIRTHS, MARRIAGES, AND DEATHS.

These are now kept at Somerset House, and may be searched on payment of the fee of one shilling. If a certified copy of any entry be required, the charge for that, in addition to the shilling for the search, is two shillings and sevenpence, which includes a penny for stamp duty. The registers contain an entry of births, deaths, and marriages since 1st July, 1837.

BANK HOLIDAYS, 1897.

ENGLAND.

Easter Monday	April	19
Whit-Monday	June	7
First Monday in August	August	2
Boxing Day (Monday)	December	27

SCOTLAND.

New Year's Day	January	1
Good Friday	April	16
First Monday in May	May	3
First Monday in August	August	2
Christmas Day	December	25

LAW SITTINGS, 1897.

	Begin.		End.	
Hilary Sittings	January	11	April	14
Easter ,,	April	27	June	4
Trinity ,,	June	15	August	12
Michael. ,,	October	25	December	21

ECLIPSES, 1897.

In the year 1897 there will be two Eclipses of the Sun:—

1.	An Annular Eclipse of the Sun, visible at Greenwich..	February	1
2.	,, ,, ,, invisible at ,, ..	July	29

Calendar for 1897.

January.

S	...	3	10	17	24	31
M	...	4	11	18	25	...
Tu	...	5	12	19	26	...
W	...	6	13	20	27	...
Th	...	7	14	21	28	...
F	1	8	15	22	29	...
S	2	9	16	23	30	...

February.

S	...	7	14	21	28
M	1	8	15	22	...
Tu	2	9	16	23	...
W	3	10	17	24	...
Th	4	11	18	25	...
F	5	12	19	26	...
S	6	13	20	27	...

March.

S	...	7	14	21	28
M	1	8	15	22	29
Tu	2	9	16	23	30
W	3	10	17	24	31
Th	4	11	18	25	...
F	5	12	19	26	...
S	6	13	20	27	...

April.

S	...	4	11	18	25
M	...	5	12	19	26
Tu	...	6	13	20	27
W	...	7	14	21	28
Th	1	8	15	22	29
F	2	9	16	23	30
S	3	10	17	24	...

May.

S	...	2	9	16	23	30
M	...	3	10	17	24	31
Tu	...	4	11	18	25	...
W	...	5	12	19	26	...
Th	...	6	13	20	27	...
F	...	7	14	21	28	...
S	1	8	15	22	29	...

June.

S	...	6	13	20	27
M	...	7	14	21	28
Tu	1	8	15	22	29
W	2	9	16	23	30
Th	3	10	17	24	...
F	4	11	18	25	...
S	5	12	19	26	...

July.

S	...	4	11	18	25
M	...	5	12	19	26
Tu	...	6	13	20	27
W	...	7	14	21	28
Th	1	8	15	22	29
F	2	9	16	23	30
S	3	10	17	24	31

August.

S	1	8	15	22	29
M	2	9	16	23	30
Tu	3	10	17	24	31
W	4	11	18	25	...
Th	5	12	19	26	...
F	6	13	20	27	...
S	7	14	21	28	...

September.

S	...	5	12	19	26
M	...	6	13	20	27
Tu	...	7	14	21	28
W	1	8	15	22	29
Th	2	9	16	23	30
F	3	10	17	24	...
S	4	11	18	25	...

October.

S	...	3	10	17	24	31
M	...	4	11	18	25	...
Tu	...	5	12	19	26	...
W	...	6	13	20	27	...
Th	...	7	14	21	28	...
F	1	8	15	22	29	...
S	2	9	16	23	30	...

November.

S	...	7	14	21	28
M	1	8	15	22	29
Tu	2	9	16	23	30
W	3	10	17	24	...
Th	4	11	18	25	...
F	5	12	19	26	...
S	6	13	20	27	...

December.

S	...	5	12	19	26
M	...	6	13	20	27
Tu	...	7	14	21	28
W	1	8	15	22	29
Th	2	9	16	23	30
F	3	10	17	24	31
S	4	11	18	25	...

January.

SUNRISE AND SUNSET.

1st Rises at.. 8 8 Sets at.. 4 0 | 15th Rises at.. 8 2 Sets at.. 4 18
8th „ .. 8 6 „ .. 4 8 | 22nd „ .. 7 54 „ .. 4 30
29th Rises at 7 45. Sets at 4 42.

Rising, Setting, and Changes of the Moon.

1st Rises 6 52 morn. Sets 1 40 aft. | 15th Rises 0 39 aft. Sets 5 40 morn.
8th „ 10 16 „ „ 10 40 „ | 22nd „ 9 31 „ „ 9 11 „
29th Rises 5 46 morn. Sets 0 30 aft.

New Moon, 3rd .... 6 3 morn. | Full Moon, 18th .... 8 16 aft.
First Quarter 10th ...... 9 45 aft. | Last Quarter, 25th...... 8 8 „

Day of Month.	Day of Week.	Year.	Remarkable Days, Festivals, Anniversaries, &c.
1	F		*New Year's Day.*
2	S	1868	DECIDED TO START SCOTTISH WHOLESALE SOCIETY.
3	𝔖	1803	Douglas Jerrold born.
4	M	1863	Working Men's College, London, opened.
5	Tu	1824	Sir J. Hibbert born.
6	W		*Epiphany.*
7	Th	1826	Lord Kimberley born.
8	F		*Cambridge Lent Term begins.*
9	S		Fire Insurance expires.
10	𝔖	1840	Penny Post commenced.
11	M	1866	Wreck of the "London."
12	Tu	1887	Lord Iddesleigh died.
13	W	1873	*Crumpsall Works purchased.*
14	Th		*Oxford Lent Term begins.*
15	F	1877	*Cork Branch established.*
16	S	1888	M. Godin, of Guise, died.
17	𝔖	1706	Benjamin Franklin born.
18	M	1890	James Hilton, director C.W.S., died.
19	Tu	1813	Sir H. Bessemer born.
20	W	1779	David Garrick died.
21	Th	1793	Louis XVI. guillotined.
22	F	1788	Byron born.
23	S	1875	Canon Kingsley died.
24	𝔖	1800	Sir E. Chadwick born.
25	M	1759	Robert Burns born.
26	Tu	1896	Lord Leighton died.
27	W	1859	Emperor of Germany born.
28	Th	1871	Paris capitulated.
29	F	1833	First Reformed Parliament met.
30	S		*Nomination Lists: Last day for receiving.*
31	𝔖	1892	Rev. C. H. Spurgeon died.

February.

SUNRISE AND SUNSET.

1st	Rises at..	7 41	Sets at.. 4 48	15th	Rises at..	7 16	Sets at.. 5 13
8th	„ ..	7 29	„ .. 5 0	22nd	„ ..	7 2	„ .. 5 26

28th Rises at 6 50. Sets at 5 37.

Rising, Setting, and Changes of the Moon.

1st	Rises	7 37 morn.	Sets 4 29 aft.	15th	Rises	2 50 aft.	Sets 6 24 morn.
8th	„	9 14 „	„ morn.	22nd	„	morn.	„ 8 23 „

28th Rises 5 42 morn. Sets 2 11 aft.

New Moon, 1st..........	8 13 aft.	Full Moon, 17th........	10 11 morn.
First Quarter, 9th	7 25 „	Last Quarter, 24th......	3 43 „

Day of Month.	Day of Week.	Year.	Remarkable Days, Festivals, Anniversaries, &c.
1	M	1878	Geo. Cruikshank died.
2	Tu	1874	*Tralee Branch opened.*
3	W	1830	Marquis of Salisbury born.
4	Th	1874	Coomassie captured.
5	F	1881	Thomas Carlyle died.
6	S	1838	Henry Irving born.
7	𝕾	1812	Charles Dickens born.
8	M		Half Quarter Day.
9	Tu	1838	General Sir H. Evelyn Wood born.
10	W	1840	Queen Victoria married.
11	Th	1826	London University founded.
12	F	1814	Custom House (London) burnt.
13	S	1849	Lord Randolph Churchill born. [*Valentine.*
14	𝕾	1876	*Opening of Newcastle Building, Waterloo Street.* St.
15	M	1865	Cardinal Wiseman died.
16	Tu	1823	Li Hung Chang born.
17	W	1841	Duchess of Albany born.
18	Th	1889	*Enderby Extension opened*
19	F	1861	Russian Serfs freed.
20	S	1855	Joseph Hume died.
21	𝕾	1879	*"Pioneer" launched. New York Branch estab., 1876.*
22	M	1875	Sir Charles Lyell died.
23	Tu	1817	G. F. Watts born.
24	W		*St. Matthias.*
25	Th	1878	KILMARNOCK BRANCH, SCOTTISH C.W.S., OPENED.
26	F	1871	Treaty of Versailles.
27	S	1807	H. W. Longfellow born.
28	𝕾		*Shrove Sunday.*

March.

SUNRISE AND SUNSET.

1st Rises at.. 6 47 Sets at.. 5 39 | 15th Rises at.. 6 16 Sets at.. 6 3
8th ,, .. 6 32 ,, .. 5 51 | 22nd ,, .. 6 0 ,, .. 6 15
29th Rises at 5 44. Sets at 6 26.

RISING, SETTING, AND CHANGES OF THE MOON.

1st Rises 6 2 morn. Sets 3 31 aft. | 15th Rises 1 51 aft. Sets 4 46 morn.
8th ,, 7 36 ,, ,, 11 59 ,, | 22nd ,, morn. ,, 6 53 ,,
29th Rises 4 24 morn. Sets 2 36 aft.

New Moon, 3rd .... 11 56 morn. | Full Moon, 18th .... 9 27 aft.
First Quarter, 11th...... 3 28 aft. | Last Quarter, 25th ...... 11 59 morn.

Day of Month.	Day of Week.	Year.	REMARKABLE DAYS, FESTIVALS, ANNIVERSARIES, &c.
1	M	1869	*1, Balloon Street, Manchester, Warehouse opened.*
2	𝔗𝔲		*Voting Lists: Last day for receiving.*
3	W		*Ash Wednesday.*
4	𝔗𝔥	1856	Covent Garden Theatre burnt.
5	F	1843	Thames Tunnel opened.
6	S		*Newcastle & London Branch & Divisional Quarterly Meetings.*
7	𝔖		*1st Sunday in Lent.* R. Whittle, director C.W.S., died 1886.
8	M	1828	Sir Richard Temple born.
9	𝔗𝔲	1874	*London Branch established.*
10	W	1863	Prince of Wales married.
11	𝔗𝔥	1812	Income Tax imposed.
12	F	1830	J. L. Toole born.
13	S		*General Quarterly Meeting, Manchester.*
14	𝔖	1864	*Wholesale Society commenced business.* BATLEY MILL COMMENCED, 1887. *Second Sunday in Lent.*
15	M	1860	HECKMONDWIKE CO-OPERATIVE SOCIETY COMMENCED.
16	𝔗𝔲	1895	J. T. W. Mitchell, Chairman of Directors, C.W.S., d.
17	W		*St. Patrick.*
18	𝔗𝔥	1848	Princess Louise born.
19	F	1876	General Chesney died.
20	S	1845	Sir Thomas Potter, Knight, died.
21	𝔖	1871	*3rd Sunday in Lent.* Princess Louise married.
22	M	1896	Judge Hughes died.
23	𝔗𝔲	1824	National Gallery founded.
24	W	1879	*Rouen Branch opened.*
25	𝔗𝔥		*Lady Day.*
26	F	1819	Duke of Cambridge born.
27	S		*C.W.S. Quarter Day.*
28	𝔖		*4th Sunday in Lent.*
29	M	1879	*Trial trip s.s. "Pioneer." Cambridge Lent Term ends.*
30	𝔗𝔲	1848	Don Carlos born.
31	W	1891	Earl Granville died.

April.

SUNRISE AND SUNSET.

1st Rises at.. 5 38 Sets at.. 6 31 | 15th Rises at.. 5 6 Sets at.. 6 55
8th ,, .. 5 22 ,, .. 6 43 | 22nd ,, .. 4 52 ,, .. 7 6
29th Rises at 4 38. Sets at 7 18.

Rising, Setting, and Changes of the Moon.

1st Rises 5 2 morn. Sets 6 12 aft. | 15th Rises 5 0 aft. Sets 3 55 morn.
8th ,, 7 57 ,, ,, 0 58 morn. | 22nd ,, 1 11 morn. ,, 8 26 ,,
29th Rises 3 22 morn. Sets 5 12 aft.

New Moon, 2nd .... 4 23 morn. | Full Moon, 17th .... 6 25 morn.
First Quarter, 10th...... 8 26 ,, | Last Quarter, 23rd ...... 9 48 aft.

Day of Month.	Day of Week.	Year.	Remarkable Days, Festivals, Anniversaries, &c.
1	Th	1872	4th Congress, Bolton. T. Hughes, M.P., President.
2	F	1877	9th Con., Leicester. Hon. A. Herbert, Pres. *L'pool*
3	S	1848	Sir R. T. Reid born. [*depôt com., 1875.* R. Allen,
4	𝔖	1774	Oliver Goldsmith died. [direc. C.W.S., d., 1877.
5	M		*Dividends due.*
6	Tu	1874	6th Congress, Halifax. T. Brassey, M.P., Pres.
7	W	1884	*Hamburg Branch commenced.*
8	Th	1818	King of Denmark born.
9	F	1877	Leith Branch, Scottish Wholesale, opened.
10	S	1871	3rd Congress, Birmingham. A. Herbert, M.P., Pres.
11	𝔖		*Palm Sunday.*
12	M	1873	5th Congress, Newcastle. J. Cowen, jun., Pres.
13	Tu	1872	Samuel Bamford died.
14	W	1873	*Armagh Branch opened.*
15	Th	1888	Matthew Arnold died.
16	F		*Good Friday.*
17	S	1876	8th Congress, Glasgow. Prof. Hodgson, Pres.
18	𝔖	1891	*Dunston Corn Mill opened. Easter Sunday.*
19	M		*Bank Holiday.*
20	Tu	1868	Scottish Co-operative Wholesale S. enrolled.
21	W	1662	Royal Society founded.
22	Th	1878	10th Congress, Manchester. Marq. of Ripon, President. *Nottingham Saleroom opened, 1886.*
23	F		*St. George.*
24	S	1866	*Tipperary Branch opened.*
25	𝔖	1844	Rochdale Pioneers' Society commenced.
26	M	1841	Dr. Boyd Carpenter born.
27	Tu	1840	First Stone of Houses of Parliament laid.
28	W	1789	Mutiny on the "Bounty."
29	Th	1856	Russian War ended.
30	F	1834	Sir John Lubbock born.

May.

SUNRISE AND SUNSET.

1st Rises at.. 4 34 Sets at.. 7 21 | 15th Rises at.. 4 10 Sets at.. 7 43
8th ,, .. 4 21 ,, .. 7 32 | 22nd ,, .. 4 1 ,, .. 7 53
29th Rises at 3 53. Sets at 8 2.

Rising, Setting, and Changes of the Moon.

1st Rises 3 51 morn. Sets 7 34 aft. | 15th Rises 7 0 aft. Sets 2 51 morn.
8th ,, 9 12 ,, ,, 0 49 morn. | 22nd ,, 0 34 morn. Sets 10 13 ,,
29th Rises 2 15 morn. Sets 6 35 aft.

New Moon, 1st .... 8 46 aft. | Full Moon, 16th .... 1 54 aft.
First Quarter, 9th ...... 9 36 ,, | Last Quarter, 23rd ...... 9 34 morn.
New Moon, 31.... 0 25 aft.

Day of Month.	Day of Week.	Year.	Remarkable Days, Festivals, Anniversaries, &c.
1	S		*Nomination Lists: Last day for receiving.*
2	𝔖	1892	J. Thirlaway, director C.W.S., died.
3	M		Royal Academy opens.
4	Tu	1876	Strike at Constantinople.
5	W	1892	*Birmingham Saleroom opened.*
6	Th	1882	Lord Cavendish assassinated.
7	F	1812	Robert Browning born.
8	S	1893	*Broughton Cabinet Factory opened.*
9	𝔖	1873	John Stuart Mill died. Half Quarter day.
10	M	1816	Bishop of Liverpool born.
11	Tu	1812	Spencer Percival shot.
12	W	1869	Co-op. Printing Society, Manchester, com. business.
13	Th		*Old May Day.*
14	F	1883	15th Congress, Edinburgh. W. E. Baxter, M.P.,
15	S		[Pres. 26th Congress, Sunderland, T. Tweddell,
16	𝔖	1871	Vendome Column destroyed. [Pres., 1894
17	M	1880	12th Con., Newcastle. Bishop of Durham, Pres.
18	Tu	1891	23rd Con., Lincoln. A. H. D. Acland, M.P., Pres.
19	W		[S. Lever, direc. C.W.S., died, 1888
20	Th	1506	Christopher Columbus died.
21	F	1888	20th Congress, Dewsbury. E. V. Neale, Pres.
22	S	1893	25th Con., Bristol. Councillor G. Hawkins, Pres.
23	𝔖		*Oxford Trinity Term begins.*
24	M	1876	*Purchase of s.s. "Plover."* [wich, B. Jones, Pres., 1896.
25	Tu	1890	J. Atkinson, director C.W.S., died. 28th Con., Wool-
26	W	1890	22nd Congress, Glasgow. Earl Rosebery, Pres.
27	Th	1873	Macready died.
28	F	1878	Earl Russell died.
29	S	1882	14th Congress, Oxford. Lord Reay, President.
30	𝔖	1887	19th Congress, Carlisle. G. J. Holyoake, Pres. Quarterly Meeting at Glasgow, S.C.W.S.
31	M	1884	*Leicester Works Second Extension opened.*

June.

SUNRISE AND SUNSET.

1st Rises at.. 3 50 Sets at.. 8 5 | 15th Rises at.. 3 44 Sets at.. 8 16
8th „ .. 3 46 „ .. 8 12 | 22nd „ .. 3 45 „ .. 8 19
29th Rises at 3 47. Sets at 8 19.

Rising, Setting, and Changes of the Moon.

1st Rises 3 52 morn. Sets 9 38 aft. | 15th Rises 9 31 aft. Sets 3 36 morn.
8th „ 0 10 aft. „ 0 5 morn. | 22nd „ 11 49 „ „ 0 51 aft.
29th Rises 2 38 morn. Sets 8 19 aft.

First Quarter, 8th ...... 7 2 morn. | Last Quarter, 21st ...... 11 24 aft.
Full Moon, 14th .... 9 1 aft. | New Moon, 30th .... 2 55 morn.

Day of Month.	Day of Week.	Year.	Remarkable Days, Festivals, Anniversaries, &c.
1	Tu		*Voting Lists : Last day for receiving.*
2	W	1884	16th Congress, Derby. Sed. Taylor, President.
3	Th	1895	27th Con., Huddersfield. Geo. Thomson, Pres.
4	F	1859	Battle of Magenta. [*Quarterly Meeting.*
5	S		*Newcastle and London Branch and Divisional*
6	𝔖	1892	24th Con., Rochdale. J. T. W. Mitchell, Pres. *Whit Sunday.*
7	M	1832	First Reform Bill passed. *Bank Holiday.*
8	Tu	1878	Alexandra Palace burnt.
9	W	1870	Charles Dickens died.
10	Th	1889	21st Congress, Ipswich. Prof. A. Marshall, Pres.
11	F	1866	Panic on the Money Market.
12	S		*General Quarterly Meeting, Manchester.*
13	𝔖		*Trinity Sunday.*
14	M	1886	18th Congress, Plymouth. Lord Morley, Pres.
15	Tu	1875	*Manchester Drapery Warehouse, Dantzic St., opened.*
16	W	1815	Battle of Quatre Bras.
17	Th	1775	Battle of Bunker's Hill.
18	F	1876	W. Pare, First Sec. of Congress Board, died.
19	S	1623	Pascal born.
20	𝔖	1837	Queen's Accession.
21	M	1884	Jos. Smith, Assistant Sec. Congress Board, died.
22	Tu	1893	Loss of H.M.S. "Victoria."
23	W	1757	Battle of Plassy.
24	Th		*Midsummer Day.* [director C.W.S., died, 1895.
25	F	1884	*Newcastle Drapery Warehouse opened.* E. Hibbert,
26	S		*Co-operative Wholesale Society, Quarter Day.*
27	𝔖		*2nd Sunday after Trinity.*
28	M	1831	Dr. Josef Joachim born.
29	Tu	1842	Sir P. O'Brien born.
30	W	1879	*Goole Forwarding Depôt opened.*

July.

SUNRISE AND SUNSET.

1st Rises at.. 3 49 Sets at.. 8 18 | 15th Rises at.. 4 2 Sets at.. 8 9
8th ,, .. 3 54 ,, .. 8 14 | 22nd ,, .. 4 11 ,, .. 8 1
29th Rises at 4 21. Sets at 7 51.

Rising, Setting, and Changes of the Moon.

1st Rises 4 51 morn. Sets 9 21 aft. | 15th Rises 8 58 aft. Sets 5 19 morn.
8th ,, 2 6 aft. ,, 11 16 ,, | 22nd ,, 10 44 ,, ,, 2 10 aft.
29th Rises 3 51 morn. Sets 7 47 aft.

First Quarter, 7th ...... 1 32 aft. | Last Quarter, 21st ...... 3 8 aft.
Full Moon, 14th .... 4 52 morn. | New Moon, 29th .... 3 57 ,,

Day of Month.	Day of Week.	Year.	Remarkable Days, Festivals, Anniversaries, &c.
1	Th	1872	*Manchester Boot and Shoe Department commenced.*
2	F	1867	Equitable Co-op. Building Society established.
3	S	1881	Dundee Branch of Scottish C.W.S. opened.
4	𝔖	1776	Independence Day, U.S.A.
5	M	1853	Cecil J. Rhodes born.
6	Tu		*Old Midsummer Day.*
7	W	1888	*Launch of s.s. "Equity."*
8	Th	1819	Sir L. Mc.Clintock born.
9	F		*Fire Insurance expires.*
10	S	1509	John Calvin born.
11	𝔖	1450	Jack Cade killed.
12	M	1869	*Limerick Branch opened.*
13	Tu	1872	Ballot Act in operation.
14	W	1873	*Waterford Branch opened.*
15	Th		*St. Swithin.*
16	F	1876	*Manchester Furnishing Department opened.*
17	S	1845	Earl Grey died.
18	𝔖	1881	Dean Stanley died.
19	M	1884	Duke of Albany born.
20	Tu	1873	Lord Westbury died.
21	W	1887	*Manchester New Furnishing Warehouse opened.*
22	Th		[*Purchase of s.s. "Marianne Briggs," 1883.*
23	F	1833	Duke of Devonshire born.
24	S	1851	Window Tax repealed.
25	𝔖	1883	Captain Webb drowned.
26	M	1832	Justice Kekewich born.
27	Tu	1880	*Purchase of s.s. "Cambrian."* J. Lownds, director
28	W	1794	Robespierre guillotined. [C.W.S., died, 1895.
29	Th	1833	Wilberforce died.
30	F	1868	Thames Embankment opened.
31	S		*Nomination Lists : Last day for receiving.*

August.

SUNRISE AND SUNSET.

1st Rises at.. 4 25 Sets at.. 7 46 | 15th Rises at.. 4 47 Sets at.. 7 21
8th ,, .. 4 36 ,, .. 7 34 | 22nd ,, .. 4 58 ,, .. 7 6
29th Rises at 5 9. Sets at 6 51.

Rising, Setting, and Changes of the Moon.

1st Rises 7 48 morn. Sets 8 34 aft. | 15th Rises 8 2 aft. Sets 8 13 morn.
8th ,, 5 12 aft. ,, morn. | 22nd ,, 11 15 ,, ,, 4 8 aft.
29th Rises 6 49 morn. Sets 6 56 aft.

First Quarter, 5th ...... 6 24 aft. | Last Quarter, 20th ...... 8 29 morn.
Full Moon, 12th .... 2 22 ,, | New Moon, 28th .... 3 29 ,,

Day of Month.	Day of Week.	Year.	Remarkable Days, Festivals, Anniversaries, &c.
1	𝔖		*7th Sunday after Trinity.*
2	M		Bank Holiday.
3	Tu	1829	Viscount Peel born.
4	W	1873	*Cheshire Branch opened and Leicester Works* [*purchased.*
5	Th	1876	*Leicester Works First Extension opened.*
6	F	1809	Lord Tennyson born.
7	S	1821	Queen Caroline died.
8	𝔖	1827	George Canning died.
9	M	1884	Sir Erasmus Wilson died.
10	Tu	1831	G. J. Goschen born.
11	W	1863	*Co-operative Wholesale Society enrolled.*
12	Th		*Trinity Law Sittings end.*
13	F		*Old Lammas Day.*
14	S	1880	*Heckmondwike Boot and Shoe Works commenced.*
15	𝔖	1771	Sir Walter Scott born.
16	M	1873	*C.W.S. Insurance Fund established.*
17	Tu	1786	Frederick the Great died.
18	W	1830	Emperor of Austria born.
19	Th	1823	Robert Bloomfield died.
20	F	1868	Abergele accident.
21	S	1889	W. P. Hemm, director C.W.S., died.
22	𝔖	1800	Rev. Dr. Pusey born.
23	M	1862	CORNER STONE, BLACKLEY STORE, LAID.
24	Tu		*St. Bartholomew.*
25	W	1886	*Longton Crockery Depôt op. Chancelot Mill op., 1894.*
26	Th	1819	Prince Consort born.
27	F	1816	Algiers bombarded.
28	S	1856	Gilbert Abbot A'Beckett, author, died.
29	𝔖	1887	*Heckmondwike Currying Department commenced.*
30	M	1843	Lord Battersea born.
31	Tu		*Voting Lists : Last Day for receiving.*

September.

SUNRISE AND SUNSET.

1st Rises at.. 5 14 Sets at.. 6 45 | 15th Rises at.. 5 36 Sets at.. 6 13
8th ,, .. 5 25 ,, .. 6 29 | 22nd ,, .. 5 47 ,, .. 5 57
29th Rises at 5 59. Sets at 5 41.

RISING, SETTING, AND CHANGES OF THE MOON.

1st Rises 11 5 morn. Sets 7 51 aft. | 15th Rises 7 14 aft. Sets 10 47 morn.
8th ,, 5 25 aft. ,, 1 57 morn. | 22nd ,, 0 26 morn. ,, 4 12 aft.
29th Rises 10 12 morn. Sets 6 24 aft.

First Quarter, 3rd ...... 11 13 aft. | Last Quarter, 19th ...... 2 50 morn.
Full Moon, 11th .... 2 11 morn. | New Moon, 26th .... 1 46 aft.

Day of Month.	Day of Week.	Year.	REMARKABLE DAYS, FESTIVALS, ANNIVERSARIES, &C.
1	W		Partridge shooting commences.
2	Th	1871	*Co-operative News* first issued.
3	F	1878	"Princess Alice" disaster. [*Quarterly Meetings.*
4	S		*Newcastle and London Branch and Divisional*
5	𝔖		*12th Sunday after Trinity.*
6	M	1870	H.M.S. "Captain" foundered.
7	Tu	1872	Powder explosion at Hounslow.
8	W	1868	SCOTTISH WHOLESALE COMMENCED BUSINESS.
9	Th	1891	William Green, director C.W.S., died.
10	F	1771	Mungo Park born.
11	S		*General Quarterly Meeting, Manchester.*
12	𝔖		*13th Sunday after Trinity.*
13	M	1884	LIFEBOAT "CO-OPERATOR NO. 1" presented to
14	Tu	1857	Delhi taken. [R.N.L.I.
15	W	1873	*Leicester Works commenced.*
16	Th	1736	G. D. Fahrenheit died.
17	F	1863	PAISLEY MANUFACTURING SOCIETY STARTED.
18	S	1854	Battle of Alma.
19	𝔖	1881	President Garfield died.
20	M	1884	*21st Anniversary of C.W.S., Commemoration of.*
21	Tu	1832	Sir Walter Scottt died.
22	W	1889	Wilkie Collins died.
23	Th	1803	Battle of Assaye.
24	F	1889	Eliza Cook (poetess) died.
25	S		*C.W.S. Quarter Day.*
26	𝔖		*15th Sunday after Trinity.*
27	M	1880	*London Drapery Department commenced in New*
28	Tu	1870	Strasburg capitulated. [*Premises, Hooper Square.*
29	W	1884	*Bristol Depôt commenced.*
30	Th	1758	Lord Nelson born.

October.

SUNRISE AND SUNSET.

1st Rises at.. 6 2 Sets at.. 5 36 | 15th Rises at.. 6 26 Sets at.. 5 5
8th ,, .. 6 14 ,, .. 5 20 | 22nd ,, .. 6 38 ,, .. 4 51
29th Rises at 6 50. Sets at 4 37.

Rising, Setting, and Changes of the Moon.

1st Rises 0 56 aft. Sets 7 56 aft. | 15th Rises 7 0 aft. Sets 11 49 morn.
8th ,, 4 17 ,, ,, 3 39 morn. | 22nd ,, 1 56 morn. ,, 3 5 aft.
29th Rises 11 46 morn. Sets 6 61 aft.

First Quarter, 3rd ...... 5 31 morn. | Last Quarter, 18th ...... 9 8 aft.
Full Moon, 10th .... 4 41 aft. | New Moon, 25th .... 11 28 ,,

Day of Month.	Day of Week.	Year.	Remarkable Days, Festivals, Anniversaries, &c.
1	F		*Cambridge Michaelmas Term begins.*
2	S	1786	Admiral Keppel died.
3	**S**	1883	Burnham Beeches made public.
4	M	1827	Marquis of Ripon born.
5	Tu	1874	*Durham Soap Works commenced.*
6	W	1884	*Launch of s.s. "Progress."*
7	Th	1849	Edgar Allan Poe died.
8	F	1871	Great Fire at Chicago.
9	S	1759	Eddystone Lighthouse finished.
10	**S**	1895	*Loss of s.s. "Unity."*
11	M	1492	America discovered by Columbus.
12	Tu	1886	*Launch of s.s. "Federation."*
13	W	1815	Murat shot.
14	Th	1872	*C.W.S. Bank Department commenced.*
15	F	1874	Prince Alfred of Edinburgh born.
16	S	1834	Houses of Parliament burnt.
17	**S**	1874	First Hospital Saturday.
18	M	1826	Last English Lottery.
19	Tu	1745	Dean Swift died.
20	W	1865	Lord Palmerston died.
21	Th	1805	Battle of Trafalgar.
22	F	1890	*Northampton Saleroom opened. Cardiff Saleroom [opened, 1891.*
23	S	1869	Earl of Derby died.
24	**S**	1852	*Michaelmas Law Sittings begin.*
25	M		*Michaelmas Lent Sittings begin.*
26	Tu	1859	"Royal Charter" lost.
27	W	1870	Capitulation of Metz.
28	Th		*St. Simon and St. Jude.*
29	F		Hare Hunting begins.
30	S		*Nomination Lists: Last day for receiving.*
31	**S**	1882	*Leeds Saleroom opened.*

November.

SUNRISE AND SUNSET.

1st Rises at.. 6 55 Sets at.. 4 31 | 15th Rises at.. 7 20 Sets at.. 4 9
8th „ .. 7 8 „ .. 4 19 | 22nd „ .. 7 32 „ .. 4 0
29th Rises at 7 43. Sets at 3 54.

RISING, SETTING, AND CHANGES OF THE MOON.

1st Rises 1 36 aft. Sets 10 55 aft. | 15th Rises 9 6 aft. Sets 0 16 aft.
8th „ 3 25 „ „ 6 18 morn. | 22nd „ 5 3 morn. „ 2 18 „
29th Rises 11 59 morn. Sets 10 0 aft.

First Quarter, 1st ...... 2 37 aft. | Last Quarter, 17th ...... 2 2 aft.
Full Moon, 9th .... 9 50 morn. | New Moon, 24th .... 9 19 morn.

Day of Month.	Day of Week.	Year.	REMARKABLE DAYS, FESTIVALS, ANNIVERSARIES, &C.
1	M	1882	*Tea and Coffee Department, London, commenced.*
2	Tu	1887	*London Branch New Warehouse opened–Manufacture of Cocoa and Chocolate commenced.*
3	W	1852	Mikado of Japan born.
4	Th	1891	*Wheatsheaf Works, Leicester, opened.*
5	F	1861	HALIFAX INDUSTRIAL SOCIETY INAUGURATED.
6	S	1860	Admiral Sir Charles Napier died.
7	𝔖	1801	R. D. Owen, reformer, born.
8	M	1886	*Trial trip s.s. "Federation."*
9	Tu	1841	Prince of Wales born.
10	W	1483	Martin Luther born.
11	Th	1889	*Longton Depôt new premises opened.* Manchester Ship Canal, first sod cut, 1887.
12	F	1849	Brunel (Thames Tunnel engineer) died.
13	S	1851	Telegraph between England and France completed.
14	𝔖	1844	Abercrombie, metaphysician, died.
15	M	1871	Stanley discovered Livingstone.
16	Tu	1891	*Aarhus Branch opened.*
17	W	1858	Robert Owen died.
18	Th	1877	Kars captured by the Russians.
19	F	1758	British Museum established.
20	S	1869	Suez Canal opened.
21	𝔖	1835	The "Ettrick Shepherd" died.
22	M	1804	Rochdale Canal opened.
23	Tu		*St. Clement's.*
24	W	1848	Lord Melbourne died.
25	Th	1748	Dr. Watts died.
26	F	1871	*Opening of Newcastle-on-Tyne Branch.*
27	S	1833	Duchess of Teck born.
28	𝔖		*1st Sunday in Advent.*
29	M	1889	Martin F. Tupper died.
30	Tu		*Voting Lists: Last day for receiving.*

December.

SUNRISE AND SUNSET.

1st Rises at.. 7 46 Sets at.. 3 52 | 15th Rises at.. 8 2 Sets at.. 3 49
8th ,, .. 7 55 ,, .. 3 49 | 22nd ,, .. 8 7 ,, .. 3 51
29th Rises at 8 8. Sets at 3 57.

RISING, SETTING, AND CHANGES OF THE MOON.

1st Rises 0 30 aft. Sets morn. | 15th Rises 10 37 aft. Sets 11 14 morn.
8th ,, 2 56 ,, ,, 7 31 morn. | 22nd ,, 6 53 morn. ,, 2 7 aft.
29th Rises 10 50 morn. Sets 11 32 aft.

First Quarter, 1st ...... 3 14 morn. | Last Quarter, 17th ...... 4 21 morn.
Full Moon, 9th .... 4 54 ,, | New Moon, 23rd .... 7 55 aft.
First Quarter, 30th.... 7 26 aft.

Day of Month.	Day of Week.	Year.	REMARKABLE DAYS, FESTIVALS, ANNIVERSARIES, &C.
1	W	1844	Princess of Wales born.
2	Th	1896	T. E. Webb, director, C.W.S., died.
3	F	1821	Lord Coleridge born.
4	S		*Newcastle and London Branch and Divisional*
5	𝔖		*2nd Sunday in Advent.* [*Quarterly Meetings.*
6	M	1882	Trollope, novelist, died.
7	Tu	1815	Marshal Ney shot.
8	W	1863	Fire at Santiago.
9	Th	1608	Milton born.
10	F	1768	Royal Academy founded.
11	S		*General Quarterly Meeting, Manchester.* Edward
12	𝔖		[Hooson, Director C.W.S., died 1869.
13	M	1884	Attempt to blow up London Bridge.
14	Tu	1861	Prince Consort died.
15	W	1891	Samuel Taylor, director C.W.S., died.
16	Th	1714	George Whitefield born.
17	F		*Oxford Michaelmas Term ends.*
18	S	1862	Slavery abolished in the United States.
19	𝔖	1805	Lord Beaconsfield born.
20	M	1848	Napoleon elected President.
21	Tu	1888	J. J. B. Beach, director C.W.S., died.
22	W	1880	George Eliot died.
23	Th	1819	Hon. Justice Denman born.
24	F	1863	Thackeray died.
25	S		*Christmas Day. Co-op. Wholesale Society Quarter*
26	𝔖		*1st Sunday after Christmas.* [*Day.*
27	M		*Bank Holiday.*
28	Tu	1857	Duke of Portland born.
29	W	1809	Rt. Hon. W. E. Gladstone born.
30	Th	1885	*C.W.S. Fire, London Tea Department.*
31	F	1882	Gambetta, statesman, died.

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